THE COMPLEAT Planter & Cyderiſt.

Together with the

ART of PRUNING *FRUIT-TREES.*

IN TWO BOOKS.

I. Containing plain Directions for the propagating all manner of *Fruit-Trees*, and the moſt approved Ways and Methods yet known, for the making and ordering of *CYDER*, and other *Engliſh Wines.*

II. The *Art* of *Pruning*, or *Lopping Fruit-Trees.* With an Explanation of ſome Words which *GARDENERS* make uſe of, in ſpeaking of *TREES.* With the Uſe of the *Fruits* of *Trees* for preſerving us in Health, or for curing us when we are Sick.

By a Lover of Planting.

London, Printed for *Thomas Baſſett* at the *George* near
St. *Dunſtan*'s Church in *Fleet ſtreet.* 1690.

BRITISH LIBRARY
15 FEB 77

THE

Preface.

Courteous Reader,

I Shall not trouble my ſelf with the Cuſtomary, and almoſt eſſential Concomitant of writing, by courting you into good Humour with a blandiſhing *Epiſtle*; only inform you, that having ſometimes very much delighted in Planting, and for the improvment of my knowledge therein, Read over moſt Books, as well Antient as Modern that treated thereof; I found in many of them very wild Notions and idle Chimera's, yet the late Authors, (as Mr *Evelin*, *Auſten*, *Ray*, *Cotton*, *Meagar*, *Worlidge*, with many others, and above all, the ingenious Mr *Langford*) Treat very excellently of moſt parts thereof, yet no one to touch every point, but in many things very defective: wherefore I thought ſome idle hours not ill ſpent, if out of them all, according to the beſt of my judgment, I cull'd ſuch Rules and Obſervations, as with the addition of my one Experience, a more compendious and compleat Work thereof might be Compiled, which would ſave the Planter much Expence and Trouble in buying, and reading ſo many as have thereon writ; the numerouſneſs of Authors rather conſuming, than advancing any Stock of knowlidge, by leading their *Readers* into ſo many Various and uncouth Paths, as at length to loſe himſelf in a Meander of confuſion and contrarieties; for that, and no other

ther end therefore is this Collection made; and herein I have imitated the Painter, that deſigning the Picture of *Venus*, ſummon'd together all the fair Ladies of the Town, and from one he Selected an Eye, another a Noſe, and from a third a Lip, *&c.* ſo that whatſoever he found commendable in any one, he reduced the ſame into his Draught, and thereby made a perfect Picture of a moſt exquiſite Beauty: In like manner have choſen out (but whether with the ſame ſucceſs lies in the determination of the Judicious) whatſoever I found either uſeful, neceſſary, or conducible to this Art, for the Planter to know, and thereby ſeparated the beſt Metal from all droſs, and impurities, and out of every one extracted the Quinteſſence, by reducing the ſame into the method you here ſee; which to thoſe whoſe Genius leads them to the Propagation, ordering, and managery of Fruit-trees, making of Cyder, and Engliſh Wines, may be acceptable, and of ſomthing more

than

than ordinary eſteem; by reaſon they now need not tumble over and rake in a multitude of Authors, for that which at one entire View they may clearly ſee, and all that is any ways requiſite to be underſtood concerning that Subject, as alſo all Impertinencies, Legendary ſtories, unpracticable, and improbable Projects thereabouts utterly rejected, which are the grand impediments and diſcouragments of this beneficial Art.

How not only eaſy and delightful, but profitable the Planting of Fruit-trees is, will be needleſs to make a diſcourſe on, ſince not only Thouſands of People, but whole Counties can infallibly evidence by their daily experience the many and vaſt advantages thereof. Only our Saturnine Northern People are not very inclinable thereunto, out of a certain conceited and inbred humour, of not doing any thing their Anceſtours have not cared for, which makes them tenaciouſly adhere to their old and accuſtomed ways of Culture, and neglect, and almoſt ſcoffingly deride any improvement their fore-Fathers did not underſtand, or uſe; this humour too, is ſomething augmented, upon a Whim they have, that their Soil is ſo Steril and improlifical by the coldneſs of their ſituation, that it would be labour loſt to go about it; all which are idle fancies, ſince experience ſufficiently teſtifies, that moſt ſorts of Apples, Pears, Cherries, and Plums with due Cultivation proſper very well in each part of our Climate, unleſs it be amongſt the meer Mountaineers; ſo that would our Countrymen but exile ſloth and careleſſneſs, they may have as flouriſhing Orchards as others; the Soil and Air being propitious enough for that purpoſe. I have known ſome ſo negligent, that altho they have had Fruit-trees given them, which being ſet made a very hopeful progreſs in their growth and bearing, had not their wretched Lazineſs permitted them to be ſpoil'd by Cattle for want of a good Fence and heedful looking to. Another pretended obſtruction is the Thievishneſs of the meaneſt ſort of People, who when any one Plants, frequently break into their Orchards, and not only rob them of their Fruit, but often injure their Trees; which objection may be as much appropriated to other Countries as ours; moſt raſcally People having a propenſity to Pilfering, yet are not other places thereby diſcouraged to the non-uſer or neglect of this gainful Art; ſince the inconvenience may be eaſily conquer'd by a little care, ſome ſeverity, and time; for if many would Plant, there would be a leſs ſcarcity of Fruit, ſo that Roguiſh People would leſs value them, and not ſo eagerly tranſgreſs thoſe excellent Laws of the 43 *Eliz.* cap. 7, and 15 *Car.* 2. cap. 2. made for the puniſhment of ſuch People.

Upon a due conſideration of the whole matter, let every one that Plants but an Orchard of one hundred Trees, of good bearing kinds, and long keeping Apples, regularly Planted, manur'd and diſpoſed according to the directions herein, but ſpeak the truth, and they'l ingenuouſly confeſs, that after eight or nine years growth of the Trees, prodigious profits have thereby accrued to their Oeconomy.

And that this Soil or ſituation is not ſo ill influenced by any Aſpect of the Heavens, as is Vulgarly, and very erroniouſly believed.

It only remains that I deprecate the *Reader* to cenſure this Book according to 'its merits, and not the Capricio's of his own Brain, and in ſo doing, he'l ſhew all the favour is expected by the Compiler, who on that ſcore bids him

Farewel.

May 24. 1683.

Chapter I.

Of the Seminary and Nurſery. Fol. 1

Chap. II.

Of the ways, Manner and Time of Grafting. 25

Chap. III.

How to Graft ſeveral ways. 36

Chap. IV.

Of Inoculating. 52

Chap. V.

Of Pruning Fruit-Trees, 63

Chap. VI.

Touching the diſtance of Fruit-Trees. 69

Chap. VII.

Choice of Ground for an Orchard, and the ordering it. 74

Chap. VIII.

The time moſt proper for Tranſplanting of Fruit-Trees. 87

Chap. IX.

Of the manner of removing and ſetting Trees. 93

Chap. X.

Of Planting Wall-fruit. 103

Chap. XI.

Of Trees of low Stature and gentle Growth, commonly called Dwarf-Trees. 110

Chap. XII.

How to Plant in the Fields, with the various advantages thereof. 122

Chap. XIII.

Of propagating and ordering Vines. 139

Chap. XIV.

Of Figs, their kinds and propagation. 148

Chap. XV.

Of Walnuts, their kinds and propagation. 149

Chap. XVI.

Of Cheſnuts. 152

Chap. XVII.

Of Filbeards. 154

Chap. XVIII.

Of Quinces, their kinds and propagation. 155

Chap. XIX.

Of Mulberries. 157

Chap. XX.

Of Medlars and Service-Trees. 159

Chap. XXI.

Of Goosberries, Currans, Raſpberries, and Barberries. 161

Chap. XXII.

Of the kinds of Peaches and Nectatins. 165

Chap. XXIII.

Of the kinds of Apricocks and Strawberries. 168

Chap. XXIV.

Chap. XXIV.

Of the kinds of Plums. 176

Chap. XXV.

Of the kinds of Cherries. 173

Chap. XXVI.

Of Pears and their kinds. 175

Chap. XXVII.

Of Apples and their kinds. 180

Chap. XXVIII.

Of Annoyances to Fruit-Trees. 195

Chap. XXIX.

Of gathering Fruit, and the beſt way of making Cyder. 204

Chap. XXX.

Chap. XXX.

Brief Monthly Memorials for the Planter. 244

THE

THE Compleat *PLANTER* AND *CYDERIST.*

CHAP. I.

Of the Seminary and Nurſery.

§. 1. AGainſt the Beginning of *October* carefully prepare Ground by Digging, Levelling, and Cleanſing it from Graſs, Stones, Weeds, and Roots, making the Mold very Fine: chooſe not a wet or very ſtiff Clay Land, nor over-rich with Dung, but ſuch as being it ſelf good, you may make better only with a little mixture of very rotten Dung: Let it be fenced from the cold as well as you can, ſo that it be free from ſhade and droppings of Trees.

Of preparing the ground for the Seminary.

§. 2. When you ſet Stones, (which if they be Stones of Fruit ſoon ripe, you muſt

How to ſet Stones for Stocks.

keep in Sand till *October*) do it by a Line, pricking holes about ſix Inches diſtance one from another, and then put in the Stones about two Inches deep, with the ſharp end uppermoſt: When one Row is finiſhed, remove your Line a Foot farther, and ſet another Row in the ſame manner; but let your third Row be about a Yard diſtant from the ſecond, that you may have liberty to go between every two Rows to Weed, *&c.* And ſet your Plum-ſtones and Cherry-ſtones each apart by themſelves, and ſo proceed to ſet as many as you have a mind. Poſſibly ſome of theſe Stones may not come up till the ſecond *Spring* after ſetting, and may not fruſtrate your deſire, if you then expect them. Some keep their Stones in Sand or Earth, in Tubs (well cover'd for fear of Mice) placed in a dry Cellar, in a Houſe, and then in *February* they Sow them (having prepared their ground) in Trenches, as Peaſe are Sown. The Stones of Apricocks and Peaches are apt to ſpring too forward, if ſet too ſoon, and be nipt by Froſts. In like manner you may ſet Stones of Sloes, Haws, *&c.*

How to ſet Nuts, &c.

§. 3. After the ſame manner you are to ſet all kind of Nuts, Acorns, Aſh-keys, or the Seeds or Kernels of any other kinds of Shrubs or Trees; but becauſe it's neceſſary that your young Wallnut-Trees and Cheſnut-trees ſhould grow longer in your Seed-plot than Stone-Fruit, before they will be fit to be removed to the place they are to ſpend their Lives in: you muſt ſet them at much farther diſtance, that they may have more room to grow big, without hurting one another.

§. 4. To raiſe Stocks from Seeds, or Kernels of Apples, Pears, or Crabs, (each of which ſort are to be ſowed by themſelves) you muſt go thus to work.

How to ſow Seeds.

When either you or any Neighbour hath made Cyder, Verjuice or Perry, take the Muſt, Murc, (or as ſome call it the Pouz) which is the ſubſtance of the fruit after the Juice is preſſed out, the ſame day or the next day after, before it heats, and with a Riddle ſift out the Seeds on a clean Floor, or Cloth, and theſe you muſt ſow (as ſoon as you can conveniently) upon Beds of very fine Earth, very thick; for ſome being bruiſed in the grinding or pounding the fruit, and others not being ripe, may never come up; then ſift Mold upon them, about two Fingers breadth in thickneſs. This way is much better than to Sow the Seeds with the Muſt, Murc, or Pouz together, (as ſome do) becauſe the Muſt will heat them, and many of the Seeds will putrifie, and others will not be able to root or ſhoot up, becauſe they are ſo impriſon'd in that dry and tough ſtuff, clinging about them.

The Beds of Earth you ſow them on may be made about two Foot in breadth, with a good diſtance between the Beds, that you may the better come to Weed them, and draw them up as you have occaſion.

How to ſecure them from prejudice.

§. 5. To keep Fowls or Birds from ſcraping them up, lay ſome white Thorn on the Beds till the Ground be well ſetled.

Some cover the Beds with Fern or Straw, to keep them warm in the *Winter*, which may not do amiſs, but then it muſt be taken off at the Springs approach.

If Moles or Mice get in (which you may eaſily diſcover, becauſe the Mice leave ſhells of the Seeds on the top of the Beds) they muſt be deſtroyed.

For Mice, lay Poiſon, or Oatmeal mixt with Glaſs pounded ſmall, and Butter, and caſt bits of it upon the Beds, or ſet Traps for Moles or Mice, better known than deſcribed.

The next Spring you will ſee theſe Stones and Seeds come up plentifully; firſt the Leaves, almoſt of the ſhape of the Kernel ſplit in two, and from betwixt them will the Stem Put forth. Keep them clean from the Weeds all the year, which muſt be plucked up while they are young, leſt if they get Root, in drawing them up, you root up the Seedlings with them; but if in the Weeding any Seedlings come up, ſet them again almoſt to the top; then water them.

Theſe Weeds, and ſuch as are pluckt up any where elſe, thrown up into a heap, will rot, eſpecially if any Lime be ſcatter'd amongſt them, and become very good Manure; but this ſhould be before they are Seeded, for then the Manure made of them will be apt to make the ground it is caſt upon more ſubject to Weeds.

If a dry time happen, you may ſome time in the Summer water the Beds.

The proper Seeds for ſtocks, and ſtocks for each kind of Fruit.

§. *6*. Your Seminary is to be ſtored with Stocks raiſed of Stones and Seeds of theſe following, *viz.*

Peach-ſtones are to yeild Stocks for Peaches and Nectarines.

Stones of the Wheat-Plum (which is a Plum ripe in *Auguſt*, and is white) or of the white Pear-Plum, or of ſome other good white Plum (in defect of them) whoſe Tree puts forth large Shoots, Branches, and Leaves, or for want of them, Stones of the Muſtle-Plum, black Pear-Plum, Primordian, or any other black or red Plum, whoſe Tree is of free growth, and large leaved, will yeild you excellent Stocks for Peaches, Nectarines, Apricocks, and Plums; but ſtocks raiſed from the ſtones of Damſons are the worſt, and very bad, being dry ſtocks, and not ſo ſappy as the before-mentioned.

Stones of the white Pear-plum or Wheat-plum make the beſt ſtocks for Peaches, Nectarines and Apricocks to be inoculated on.

The Seeds of Pears yield the beſt ſtocks for Pear-trees.

Grafting Pear-Grafts or Cyens on a white Thorn or Quince ſtock, will make the Tree to be of ſmall growth, and the Fruit bad, having hard and ſtony Cores, if grafted upon a Thorn Tree.

Black Cherry ſtones and Red Cherry ſtones yield ſtocks to Graſt or Inoculate Cherries on; but the Black Cherry ſtocks are beſt; for they yield goodly ſtraight large Plants, and full of Sap, and become greater Trees than thoſe produced of Red Cherry ſtones, and conſequently more proper for Orchards and Fields.

To Inoculate an Apricock very low on a white Pear-Plum ſtock, or on a Wheat-Plum-ſtock, and then after a Years growth Inoculate a Peach or a Nectarine on it, is highly approved; only this way there will be two Years loſs of time: And note that the red Roman Nectarine will ſcarce take on a Plum-ſtock any other way.

Stocks raiſed of Crab kernels are better than thoſe raiſed of Apple kernels.

The Seeds or Kernels of Crabs and Apples yeild ſtocks the moſt proper to Graft any kind of Apple upon, and though the ſtocks raiſed of Apple-ſeeds or Kernels do ſhoot more clear and ſmooth, and come forward faſter, and are of a quicker and larger growth in ſtock than ſtocks raiſed of Crab-kernels or Seeds, and Grafts grafted on them will grow quicker than on Crab-ſtocks, yet by the univerſal conſent and experience of all, ſtocks raiſed from the Seeds or Kernels of Crabs are preferred either for

Orchards or Fields, Cyder, Baking, or Table, far before ſtocks raiſed of Seeds or Kernels of Apples, and that for theſe reaſons: Crab-ſtocks are more free from Canker, and more hardy, and ſo better able to endure cold and courſe Land, and becauſe they root better, and ſo will make large Trees, and will make Buds, Bloſſoms, and Fruit more hardy and ſtrong to endure froſt and cold weather in the Spring: it alſo not onlp preſerves, but quickens, enlivens, makes brisk and poignant the Guſt of any delicate Apple.

But if you intend to propagate any delicate Apple which is over tart in taſte, Graft it on ſome ſtock raiſed of the Gennet Moyl, or ſome ſweet Apple Tree, which will ſweeten its juice ſomething. So a Pear is improved by Grafting on a Quince-ſtock, but the Tree will not be large, but ſerve well for a Dwarf-Tree.

However where you cannot conveniently be ſtored with Crab-kernels, Apple-kernels are not ſo much inferiour to them, but they may well enough be made uſe of (as they commonly are) for raiſing ſtocks to Graft Apples upon.

Objections againſt Crab ſtocks got out of Woods and Hedges to Graft Apples on.

Do not furniſh your ſelf with Stocks for Apple-trees by getting young Crab-trees out of Hedges, rough grounds, and Woods, becauſe the Workmen in getting them break ſome, and hurt others of the principal Roots; and it ſometimes falls out that they have been cut down, and Sprung up again, out of the remaining ſtump, or otherwiſe hurt, which though not eaſily diſcern'd, becauſe skin'd over, yet will be a prejudice to them for ever; alſo many of the ſtocks ſo got out of Woods and Hedges, have, for want of room, and by reaſon of ſhades and the dropping of other Trees about them, been checkt and baffl'd in their growth, and ſo become crooked, ſcabby, ill grown, rough, and unkindly, and never like to make good and thriving Trees. Some that furniſh themſelves this way with ſtocks, chooſe ſuch as are largeſt, and thoſe having for the moſt part, thick and hard Bark, and old Roots, which come on but ſlowly when they are removed to make Apple-Trees. Likewiſe if theſe ſtocks be not Grafted very low, (and if they are, a Years growth or two will be loſt) they will put forth Branches and Suckers of their own every Year, in ſuch abundance, that without conſtant pruning of them, the Grafts will be in danger of being ſtarved, and a better advantage may be made of Crab-trees in Hedg-rows and rough Grounds, by grafting them where they are, where they will thrive the better.

The only objection is, that a Man cannot be furniſhed with Trees of a good largeneſs, to bear ſo ſoon by ſtocks raiſed by Kernels and Stones as thoſe got out of Woods, &c. or thoſe raiſed by Suckers, that may be of ſeveral Years growth before uſed.

To which it's anſwered and approved by daily experience, That if at the ſame time that you get Crab-tree ſtocks (of ſix or ſeven Years growth) out of the Wood or Hedges, or Suckers, and ſet them in order to be grafted, you ſow Kernels or Stones, the Stocks and Suckers you ſo graft for ſix or eight years may continue larger and bigger than Trees that come of Kernels and Stones, but yet theſe leſſer Trees ſhall ſo get ground of the other, that by the tenth or twelfth year they ſhall not only overtake them, but out-ſtrip them in growth.

Stocks for Pears, Plums, and Cherries, of ſuckers, not good.

And as to the way of raiſing of Stocks for Pears, Plums, and Cherries, by Suckers, it's to be obſerved, that Trees ſo raiſed will be ever apt to caſt up ſuch Suckers themſelves, and ſuch as do, are ſeldome found to be good bearing Trees, becauſe they expend their Sap ſo much that way.

Nevertheleſs Suckers ſpringing out of the Roots of Pear-Trees, Plum-Trees, and Cherry-Trees, may be good Stocks for to graft Pears, Plums, and Cherry-Grafts on for Wall-Trees and Dwarf-Trees, becauſe they make Trees of ſmall growth.

And one ſhall very difficultly ſtore himſelf with Crab-Tree Stocks from the Wood and Hedges, and from Suckers, to ſuch a number as he may deſire, becauſe many of them will prove bad and miſcarry; whereas as from Kernels, or Seeds and Stones, it's almoſt the ſame labour to have thouſands as hundreds, and ſuch as will almoſt all of them be fit and proper for uſe.

You may alſo raiſe Stocks to graft Apples and Pears on, by ſetting cuttings of the Gennet Moyl, and *Kentiſh* Codlings, and the Quince-Tree for Pears, by ſetting thoſe in the place where the Trees of Apple and Pear are to grow, in Dwarf or Wall Trees: and alſo the ends of Roots, cut off from young Trees, taken up to be traſplanted, and ſet in Beds of good Earth, will ſhoot forth tops, and become good Stocks, which may ſerve for Dwarf Trees and Wall Trees.

Or you may Inoculate Buds on the ſmall Roots of great Trees that grow at fartheſt diſtance from the Bodies, and after a years growth to cut off the Root about a Foot in length, with the new ſhoot growing upon it, and tranſplant it; becauſe a Tree will be raiſed thus ſooner than from a Seed or Stone.

In caſe of an exigent for a ſtock or two, this way may be practiſed, but it will be found too troubleſome for a general uſe.

Suckers ſpringing from the Root of the Wheat Plum-tree, or white Pear-Plum-tree, make excellent ſtocks for Peaches, Nectarines, Apricocks, and Plums; but to have plenty of ſtocks for large ſtandards for Orchards or Fields, there is no better way of raiſing them, than by ripe Kernels or Seeds of Crabs, or for want of them, of Apples, (the ripeneſs of the Seed or Kernel is known by its being black) and of Pears for Pear-ſtocks, and of Cherry-ſtones for Cherry-ſtocks, and of Peach-ſtones for Peach-ſtocks, to Inoculate Peaches and Nectarines on, and of Wheat-Plum and white Pear-Plum-ſtones to graft or Inoculate Peaches, Nectarines, Apricocks, and Plums on; with which a Man may eaſily provide himſelf.

Of removing and tranſplanting Seedlings or Seed plants from the Seminary into the Nurſery.

§. 7. In the later end of *October*, or beginning of *November*, after one Summers growth in the Seed-plot, you ought, and muſt in no wiſe neglect to draw up with your hand ſuch of your Crab, Apple, or Pear-Seedlings, as you find grown a Foot or more in height, but thoſe which are not grown a Foot in height you may let remain in your Seed-Plot another year; and as for thoſe proceeding from Stones, they need not be removed, but grafted or inoculated in the Seminary, the ſtones being ſet at ſix Inches diſtance, as afore is ſaid; but very many will in *October* remove thoſe coming of ſtones as well as of Seeds or Kernels, and like it beſt; becauſe ſuch as grow two or three years upon the Seed-bed before removing, thruſt their Roots very deep in the Earth, and are not only very hard to be drawn up, but their Roots, when ſet again, (though a great part be cut off) muſt of neceſſity be thruſt down very deep into the Earth; and then ſuch ſpread their Roots deep and below the good Soil, by thruſting their young Roots from the loweſt part where the Root was cut off, and ſo they neither have ſo good Nouriſhment from the Earth, (as ſpreading below the beſt Soil) nor are they ſo eaſily tranſplanted when ready, as thoſe drawn the firſt year, and are ſet very ſmall.

How to order the Seedlings after drawn up.

§. 8. When the Seed-plants or Seedlings are drawn up, cut off the ſide-ſprigs from about the top, and the ſtrings from about the Roots, and ſnip off the ends or extremities both of the top, that it may not run too faſt upwards, but the Body may grow in bigneſs, and of the Tap or Heart-Root, that it may not run directly downwards, (leſt it run farther than the good Soil) but may be more apt to ſpread its Roots in breadth, and near the top of the Ground, where the beſt Soil is.

Then have Beds prepared of good fertil dry Earth, not over-rich, leſt upon removal afterward into a much worſe Soil, (as for the moſt part Orchard and Field-ground is) your Trees coming of a ſudden from ſuch delicate Food to ſuch courſe Fare, pine away, if they do not periſh. And this is rationally thought to be the cauſe why many Trees bought out of *London*-Nurſeries (which are vaſtly deep with fat and rich Manure) decay, or come on very poorly when they are brought into the Country.

Therefore upon every removal or tranſplanting, either of Seed-plants, or young Trees, endeavour to have Earth as good, or better (to place next the Roots at leaſt) than that out of which they were taken.

If any of theſe ſpring upright, top them early, (that is, cut off about an Inch long at a Bud at the uppermoſt end of the Seed-plant, that the cut may be covered with a freſh ſprig) and it will make them grow bigger Bodied, and ſpread at the cut place, and ſo become ſooner ready for Grafting. And let not the Roots be too long; about a handful in length (or leſs) is ſufficient; for if the Roots be long, and ſet deep, the Trees afterwards are taken up with more difficulty, and worſe Roots. And the reaſon why all Seed-plants ought to be tranſplanted or removed after one Summers growth on the Seed-bed, is, becauſe they get good Roots, which of themſelves thruſt down one ſingle Root for the moſt part, and that into the bad Soil. But if you would have ſtocks an Ell or more high, to Graft or Inoculate for Standerds, you muſt not top them, or cut off their Tops; becauſe topping them makes them to ſpread at the cut place, and their growing up to ceaſe.

If you would Plant an Orchard, and have excellent ſound Trees, early, and great bearers, and the Trees free from Cankering; remove your Seed-plants into the places, and in the order you intend your Apple or Pear-Trees to grow, and let the Seed-plants or Stocks grow there two years, and then graft them, and order them as you do Trees that are ſet in Orchards, and by this means there will need no removal after Grafting, and you'l be quit of the many miſchiefs that attend Tranſplanting, and have better bearing, freer growing, and ſounder Trees than any you can tranſplant out of the Nurſery into the Orchard, only you muſt carefully preſerve them from Cattel, Hares, and Conies, both before and after Grafting, until they have attain'd a ſufficient height and bigneſs.

Of ſetting the Seed-lings, ſtocks, or ſeed plants.

§. 9 Let every Bed you make for ſetting theſe Plants or Stocks in, be about two Foot broad, leaving room betwixt each Bed to walk and work about them, without prejudicing the Plants or Stocks; ſet two rows a Foot or more diſtant from each other on every Bed, by drawing a Line and pricking holes a full Foot a ſunder; let the holes be ſo deep that if the Roots be not very long, you may ſet your plants or ſtocks about two fingers breadth deeper in the ground than they grew in the Seed-Plot; cloſe the Mold about them, and if it be a very dry time, water them the very ſame day,

day, the better to ſettle the Earth about them.

If you can get old Fern, (in ſome places call'd Brakes or Brackin) or for want of it, Straw or new Dung, cover the Beds with it, which will keep the Roots warm in the Winter, and preſerve them from over-much heat in the Summer; if the Land be any whit ſtiff, this cover will make it mellow, and when rotten enrich it, and very much hinder the growth of Weeds, which ought duly to be pluckt up; and put new Fern, *&c.* as the old rots: and be ſure you draw the biggeſt of the ſtocks firſt, and ſet them by themſelves, and the leaſt by themſelves, and ſet ſtocks of Crab-kernels by themſelves, and of Apple-kernels by themſelves, and ſtocks raiſed of Plum-ſtones, Cherry-ſtones, Peach-ſtones, each diſtinctly by themſelves in ſtraight rows.

If you intend to raiſe any ſtocks to be ſet out in Fields before they are grafted, you muſt not top them upon their firſt removal, neither need you remove them before they are grown high enough to ſtand in the Fields; if you find that they ſpread their Roots, and run not downwards, as in gravelly, and ſuch kind of Soils they will not be apt to do, (and by the firſt you draw up you may judge of the reſt, whether they do or no) if you reſerve any for this uſe, you had beſt chooſe ſuch as grow ſtraight, and at convenient diſtance one from another, which you may contrive to do in drawing out the firſt two years ſuch as be of ſtature to be tranſplanted from among them; dreſs theſe once or twice a year, by cutting off the biggeſt ſide-branches, to haſten their growing tall, but leave on the top, and ſome ſmall ſide-branches, for this cauſeth them to thrive in bigneſs the more, which they ought to do proportionable to their height, or elſe they will be too weak to bear a top.

Obſerve this alſo in your Grafted Trees in your Nurſeries or elſewhere.

Grafts muſt not be grafted on different kinds.

§. 10. All Stocks and Cyens or Grafts that proſper when they are joynted together, are congenerous, or of the ſame kind, and nearly related in ſome degree; therefore Cherry-Grafts, or Cyens, Grafted or Inoculated on Plum-ſtocks, will not proſper long, nor Plum-grafts on Cherry-ſtocks, neither do Apple-grafts on Pear-ſtocks, nor Pear-grafts on Apple or Crab-ſtocks. Neither will an Apple Cyens grow grafted upon a Sallow, Poplar, Alder, Elm, or Horſe-plum.

Apple-ſeeds, &c. will not produce the ſame kind of Apple, &c. they were had out of.

Seeds or Stones of Fruits gathered from Trees that have been grafted, or inoculated on ſtocks of different kinds from the Graft or Cyens, produce of themſelves (not being grafted or inoculated) not the ſame Fruit as that was from whence the Seed or

Stone came, but a different and moſt commonly a far worſe Fruit; and as concerning the Seeds of Apples, it's to be obſerved, That although they produce not Trees bearing the ſame kind of Apples as thoſe the Seeds were had of, yet without grafting they will bring forth a good harſh Fruit that may yield good Cyder; and thus it's ſaid we came by ſome of our beſt Cyder-Apples. Neither are ſome ſorts of Crabs ſo contemptible a Fruit as they are generally accounted; for being gathered very ripe, and kept a good while to mellow, ſome of them will make good Cyder, or ground with other mellow Fruit, do much enrich the Cyder, and are the beſt refiners of foul Cyder; and generally Crabs yield a ſtrong Liquor, ſo that ſuch kind of Crab-ſtocks may rather help to mend ſome Apples of weak Juice, than make them worſe. And this inconvenience is always found in Trees coming of Seed, and not grafted or inoculated, That they are very long before they bear Fruit, whereas ſtocks grafted or inoculated from Trees, which experience aſſures are of good bearing kinds, and Fruits, commonly bear well in three or four years, and ſo continue. If you would have ſome Trees raiſed of the Seeds of Apple-kernel, view your Seminary about Michaelmas, and ſee which of your Seedlings have produced the broadeſt, faireſt, and largeſt Leaf and Shoot, and thoſe elect for your Trees to be ſet without Grafting, for it's commonly obſerved that thoſe Seed-plants or Trees that have very large, fair, and broad Leaves, bear the faireſt and largeſt Fruit.

Meer grafting betters not Fruit.

§. 12. Mere Grafting doth not meliorate the Fruit at all; as if you graft a Cyen upon the ſame Tree you took it from, the Fruit will be the very ſame, without the leaſt alteration from what the Tree bore before it was ſo grafted; but Fruit may ſomething participate of the nature of the Stock wherein it's grafted, ſo as to be made by it either better or worſe; as if you graft a very ſour Apple Cyen upon a ſweet Apple Tree, the Fruit will be ſomething better: So a ſweet Apple Cyen, grafted on a very harſh ſour Crab-ſtock, hath produced a better Fruit than the Tree from whence the Apple-graft was had. So a Pear-Cyen, grafted on a Quince-ſtock, hath mended the Pear; and though the Graft doth keep its own Nature, and mightily predominate on what Stock ſoever it's grafted, yet ſuch an union as that of the Stock and the Graft, in natural Bodies, is hardly conceivable without ſome commixture of their Natures, and there are ſome reaſons from experience which make this more than probable, as

I. The Seeds of a grafted Tree take much after the ſtock, and it's ſomething ſtrange to conceive the Kernel ſhould participate ſo much of the ſtock and the Fruit be nothing influenced by it.

II. Thoſe that produce the beſt Fruit by their ſtones or ſeeds, yet vary from the Fruit the ſeed or ſtones were taken out of, which in all likelihood proceeds from the mixture of the quality of the ſtock and Cyen in that Tree the ſtone came from.

III. It's manifeſt that amongſt Trees of one kind, in the ſame Orchard, you ſhall have ſome one of them bear better Fruit than any of the reſt ſometimes; and it's not known what to impute this excellency more probably to, than that the Stocks they were grafted on might be Crab-trees that bore Crabs of ſeveral kinds, ſome better, ſome worſe.

So that to conclude, it cannot be amiſs to be ſo far curious about the Stocks you graft, as rather to chooſe ſuch Seeds and Stones to raiſe them from, as come from Trees that bear the beſt Fruit in their kind (if you can have them) than to take them at adventure, which makes ſome chooſe Seeds out of fair, large, juicy Crabs, to raiſe ſtocks to graft ſome delicate Apple-grafts on.

Concerning the Pith of a Tree.

§. 13. It's held by ſome, That the Kernel of the Fruit hath a great dependance upon, and Sympathy with the Pith of the Tree, and that hollow Trees, though they grow and bear Fruit, yet that Fruit hath few Kernels in it, and thoſe little better than withered Husks; and experience evidences that there are ſome hollow Fruit-trees that bear Fruit ſo much more excellent than any of the ſame kind the Owners have had, or could elſewhere meet with, that they have been very deſirous to propagate from them, but never could, any manner of way, raiſe young ones of thoſe old Trees, that would bear ſo good a Fruit as the old Trees: which ſeems to intimate, That the Fruit of a Tree may be the better for the Piths being conſum'd; and if that be true, as it muſt be ſo, becauſe the Pith conveys to the Fruit a worſe ſort of Juice than any other part of the Tree doth; and therefore being freed from that infection by the conſumption of the Pith, the Fruit becomes more choice and delicate: and that the Pith is the conveyance of a courſer or other ſort of juice, is rendred in ſome ſort probable, becauſe (as hath been before obſerved) the Kernels of Fruit depend much upon the Pith, which almoſt never produce ſuch good Fruit as the ſeeds or ſtones come out of, but generally much worſe.

§. 14.

Reaſons why every one ought to Graft, Plant, and raiſe his own Trees.

§. 14. Becauſe moſt men are through ignorance indifferent whether they have Fruit-trees of their own or no, becauſe for a little money they can have Plants from others, ready brought up to their hands; yet it's far better to have them of their own bringing up and Propagation, and to have Seminaries and Nurſeries of their own for this purpoſe, for theſe reaſons,

I. Becauſe this way a Man ſhall be ſure to meet with no failure, either in the kind, great bearing, or goodneſs of the Trees and Fruit; in all which he ſhall frequently be diſappointed and loſe much time and expence, if he have his Trees upon the reputation and truſt of others, who make a Trade of ſelling them, and are therefore many times incurious, careleſs, and perhaps knaviſh in raiſing them, and in ſtead of the right kinds, (if they can get either eaſe or any thing by it) will not ſtick to put him off with another.

II. This trouble and expence of buying young Plants, and getting them home, (many times from places very remote) and the prejudice they often receive in the carriage, will be wholly prevented.

III. This way a man ſhall, with almoſt the ſame labour and charge, both furniſh himſelf ſufficiently, and have ſo many more as to defray the Charge he may be at about it, if he will ſell them, or to gratifie his friends, if he had rather beſtow them.

IV. He will this way be provided with ſtocks for Apples, Pears, Plums, Cherries, and all choice Wall-Fruit, raiſed from Kernels and ſtones of Fruit, which are incomparably better than ſtocks procured any other way.

And laſtly thoſe that propagate Trees for Sale have their Nurſeries exceeding fat, rich, and fertil, whereby Trees removed out of them into the Orchard, *&c.* of others, which are always almoſt of a far courſer and worſe Soil, frequently prin, pine away, and very often dye; and if they live, they ſeldome prove fair, large, or well bearing Trees; and it often happens, that the Air and Soil into which they are removed, is heterogeneous and unſuitable for Trees coming out of the Air and Nurſery you have them: For it's a ſure Rule, always to tranſplant or remove Trees or Stocks from a worſe to a better Soil upon every removal, and then they will proſper well. So Trees removed out of the South into the North ſeldom proſper, whereas Trees removed out of the North into the rich Southern Soils, like well: So Trees brought up in Nurſeries in *Lancaſhire*, and tranſplanted into *Ireland*, thrive and bear exceeding well.

About the Bark of Trees on Barren ground.

§. 15. Stocks or Trees that grow on barren ground, have commonly their Bark very white and hard, whereas thoſe on good Land have their Bark very ſmooth, green, and plump, and the laſt years ſhoots large and full; but the others ſhoots are ſhort, ſmall, and meagar.

How to raiſe a Fence of Crab-trees

§. 16. If one have a mind to raiſe a good new Fence about a Field he deſigns to incloſe, which he can keep for four or five years together, to bear Corn, or Clover-graſs to Mow, that Cattel may be ſo long kept out of it, he may do it rarely well, by ſowing Apple-Kernels of as many ſorts as he will on the top of a new-made Ditch-bank, making the dead Hedge (that is uſually on the top of the Bank) on the utſide of the Ditch, to defend them.

When they are grown up, he may plaiſh this Hedge, leaving at every four or five yards diſtance one of the beſt Trees to grow up, which of themſelves will bear good Cyder-Fruit, (which he may gueſs at by the broadneſs and largeneſs of the Leaves they bring forth) or may be grafted to bear what pleaſeth the owner: and by this means in a little time, and with ſmall charge, he ſhall have a fruit-bearing and impregnable hedge.

Remove out of the Seminary all Stocks, whether raiſed of Seed or ſtones.

§. 17. Let all Stocks whatever, that are removed, grow a year or two before you graft them; and notwithſtanding ſome opinions to the contrary, no ſort of young Plants or Stocks, that come of Seed or Stones, ought to be grafted or inoculated in the place where they were ſowed, before that they have been removed; becauſe if they be not removed, they thruſt down a ſingle Root or two commonly into Clay, Gravel, or moiſt ground, *&c.* which Root or Roots draw bad nouriſhment from below the good Soil, which always is neareſt the top of the ground, and thereby hurts Trees, Roots, and Fruits, and in caſe any of them be there grafted, and removed afterwards, they want good Roots, and are difficult to remove, becauſe not removed when young, of one or two Summers growth.

CHAP. II.

Of the Ways, Manner, and Time of Grafting.

The time to Graft in.

§. 1. FRom the middle of *January* until the beginning of *March*, if the Weather be open, without Froſt, and grow warm, the wind not being North or North-Eaſt, you may graft Plums, Cherries, and Pears, but not Apples, till the Bark of the Stocks will a little riſe or peel from the wood, which is ſeldom before the middle of *March*, and often not till *April*, becauſe this is neceſſary for the beſt way of grafting them; but if you will graft any Apples in the Cleft, you may do it from the beginning of *March* until the tenth of *April*, and that with ſucceſs; but grafting in the Cleft early in the beginning of *March*, is beſt, eſpecially, if the weather be mild and open: and Graft not within ſixteen hours before or after the Change or full of the Moon.

The grafting Inſtruments.

§. 2. Your Inſtruments to graft with are to be a fine, neat, ſharp, ſmall, well-ſet Saw, to cut off the heads of ſome ſtocks which are grown too big for the Knife; a good ſtrong Pruning-Knife, made a very little coming, which will be ready to cut off the heads of your ſmaller ſtocks you intend to graft: alſo a good midling Knife to cleave ſome of the ſmaller ſort of ſtocks with; alſo an Inſtrument like a broad Chiſel, the handle of Iron, and the edge alike on both ſides, not ſloping on one ſide, like that of Joyners, but plain as a Knife, and very thin, about three or four Inches in breadth; with which you may either cleave your larger ſtocks, or prune your Trees; alſo a little Mallet, or elſe a ſtick about a Foot long, made of an old Spade or Shovels handle, or ſome other hard wood, to uſe inſtead of a Mallet, to drive your Knife when you cleave the ſtock: Alſo an Iron Tool about ſix Inches in length, made turning at each end about an Inch and an half; if it be ſteeled at either end, it will be the better, and not ſo apt to bend when you open a ſtrong ſtock: theſe ends are to be made flat, a little like a Chiſel, but not above half an Inch broad at moſt, only pretty ſtrong; if you will, one end may be pretty ſmall for the ſmaller ſtocks, and the other bigger; the uſe of it is to ſupply the place of a Wedge, by holding open your Stock till you have ſet your Graft or Cyen exactly in its place in the Cleft of the Stock.

This repreſents the Form thereof.

Inſtead of this Inſtrument you may uſe a Wedge of hard wood, about a Foot long, eſpecially for great and large ſtocks.

You are alſo to have a ſharp Pen-knife, to ſhape your Grafts or Cyens with, and alſo a Whet-ſtone to quicken the edge of your Knives when dull, and a Basket to carry your Tools in, and another to carry your Grafts or Cyens in: Alſo you are to have Ruches, Baſſes, or ſoft Flags, to bind Grafts or Buds to the Stock. You may be furniſhed therewith at the Mat-makers.

The manner of preparing clay: and how to clay grafts.

Alſo you muſt have Clay prepared with Horſe-dung very well mixed and workt together as Mortar, about two parts Clay: If it be not well temper'd and wrought together, it will be apt to fall from your Graft, in caſe of much Wet, or chop, or cleave if dry weather happen, and ſo you'l loſe your labour in Grafting; for you muſt Clay your Grafts cloſe on every ſide an Inch above the top of the Stock, and an Inch below the bottom of the Clefts, that no Air get in to wither the Graft; and keep Clay on the grafted part until the ſtock be covered over with the Graft. For Clay is as a Salve to a Wound, which heals it up, and it rather keeps out moiſture than otherwiſe, if well cloſed; and alſo preſerves from dry winds, Sun, and other annoyances: Therefore keep on the Clay a year or two, till the head of the ſtock be cover'd with the Graft, and the cleft healed up.

Choice of Grafts or Cyens.

§. 3. Theſe Cyens or Grafts you get ought to be the laſt years Shoots, ſtrong and very well grown, that grow on the top or out-ſide of a Tree, that ſeveral years experience of thoſe that know it, can faithfully aſſure you bears very well, and good fruit of its kind; and cut not off the tops of the Cyens until that you graft them, for ſo they will keep better; but immediately after grafting, the tops of Grafts are to be cut at a Bud, that they may ſpread the better, and of ſuch as are but ſhort, if there be Bloſſom-buds on the top, as it's commonly ſeen in Pearmain-Cyens, and many other good bearing kinds. Grafts that are very ſmall and ſlender commonly fail, therefore chooſe the faireſt, fulleſt, and ſtrongeſt ſhoot of the laſt years growth, and fulleſt of Buds, and of good bearing kinds, elſe you may have fair Trees, and little or no Fruit on them, and ſo fancy you have an Orchard, though ſeldom Fruit; for ſome Trees will grow and bloſſom very well, yet rarely bear Fruits; the reaſon is, for that they were grafted from bad bearing Trees, and are of bad bearing kinds.

A ſhoot or Branch of the year next foregoing makes the beſt Cyens or Graft, and thrives beſt, though in *Herefordſhire*, when they graft old Trees, they commend and uſe Cyens of two or three years growth, yet thoſe are ſeldom found to have convenient Buds to put forth at, and often times have bloſſoming Buds on them, and make not ſo good a growth, neither have they ſo good a joint to graft at as thoſe of the laſt year.

When you get Grafts, you had beſt cut off at leaſt three Inches of that which grew the year before with them, beſides the laſt years Shoot, for ſo they will keep the better, and you may uſe about an Inch and an half of that old Wood in every Cyens when you Graft it.

Perhaps you may not have ſeveral ſorts of Plums, Cherries, or Pears ſo near you, as that you may get Buds freſh enough for Inoculation: In this caſe you may procure Cyens, and graft them, and they will continue freſh, though you ſhould ſend for them from beyond Sea.

Theſe Cyens or Grafts of any kind may be grafted immediately after they are gotten, and that ſucceſsfully; or they may be kept three Weeks or a Month before they are uſed, and there ought to be a Fortnight or three Weeks betwixt the time of their being cut, and their being grafted, that the Stocks in that time may be repleniſhed with Sap, and the Cyens more empty of it; and then they will quicker incorporate by more greedily attracting the Sap out of the Stock.

To keep your Cyens or Grafts after they are cut, you need not, as ſome direct, bury them in moiſt Mold; for this may be a means to make them ſwell and bud forth by receiving moiſture from the Earth, and then when by grafting they are expoſed to the cold open Air, they will be in danger to wither and die before they have nouriſhment from the Stock. You may lay them in a dry houſe, ſo it be near no heat, or under the ſhade of an old Tree or Hedge, and cover them all over with dry Mold, that the Air may not have too much Influence upon them: though they ſeem ſomewhat dry, yet if they cut with a freſh colour, and be not much withered, they will not grow the worſe, but rather the better; yea ſome that have ſeemed withered, being carried 70 or 80 Miles, have grown well. And they may be carried hundreds of Miles in a Box of Mold, or their ends ſtuck in Clay, or a Turnip, and wrapped about with green freſh Moſs, that they bruiſe not; bind not many together; for if ſo, thoſe in the middle will dry, and be ſpoiled in certain days, but rather lay them thin in the Mold.

Be very careful that the Buds be neither hurt or rub'd in the binding or carriage of the ſaid Grafts.

In providing Cyens or Grafts of Pears, Plums, and Cherries, you muſt cut them in the beginning of *February*, having reſpect to the forwardneſs or backwardneſs of the Spring, and the warmth or coldneſs of the Country you live in; but you muſt be ſure to cut them before the Buds have any ſpeck of white appear on them.

Cyens or Grafts for Apple-Trees will ſeldom be too forward any time before the beginning of *March*.

Grafts of Cherry and Plum-Trees muſt be grafted ſooneſt, becauſe they bud earlieſt, and you are to begin with them ere they bud forth, then with Pear-trees, and laſtly with Apple-trees.

Elect the faireſt and largeſt Grafts on the top Branches of a Tree, and of the laſt years growth, and on the Sun-ſide of the Tree, which will bear ſooner than thoſe got on ſide-branches.

Of joints and height of grafting

§. 4. There be ſome indifferent whether they graft at a joint or no, but forecaſt to have a Bud directly behind the ſhoulder of the Cyen; if Cyens with joints were ſcarce, you might practice ſo on ſmall Stocks, that will ſpeedily be cover'd, but if Cyens can be had with joints, never graft with others, for theſe will cover the Stocks ſooner. However this is the opinion of many, yet I always grafted at one of the loweſt Buds on the thicker end of the laſt years Shoot or Sprout, and valued not a joint of the former years growth, unleſs the Graft were too ſhort; for the ſtraiter and ſmoother your Graft is, the more exactly you may fit it to your Stock, eſpecially if your Stock be young, and have but a thin Sap, and this was very ſucceſsful; however grafting at a joint may do well if the Stock have a thick Sap or Bark, as commonly your Woodſtocks and all large Trees have. The wood below the knot or ſeam is commonly crooked, and not ſo ſmooth and ſtraight as the wood below a Bud on the thicker end of the laſt years Shoot; therefore rather graft at a Bud, becauſe you may joyn the Graft and Stock the more exactly.

Height to graft at.

§. 5. If you Graft Apple or Pear-Cyens, graft a Foot or leſs from the ground; do the like for Wall-trees and Dwarf-trees, but if you graft Cherry or Plum-Cyens, for ſtandards in Orchards or Fields, graft them ſix or ſeven Foot high, and at that height let them begin to ſpread; and when you graft, cut the top of the Cyen or Graft off cloſe above a Bud, about four or five Inches above the Shoulder, if it be for a Standard-tree, two Buds above the Clay being full enough; but for Dwarfs or Wall-trees, you may let the Cyens or Grafts be ſix Inches or more long, with ſeveral Buds, that they may ſhoot forth many Branches and ſpread from the very Stock. If you Graft old Apple, or Pear-trees, or their Branches, you muſt Graft according to the thickneſs of their Branches, which is uſually ſeven or eight Foot high or more. It will do well in Grafting Stocks for large ſtandards, to put but one Cyens or Graft into a Stock (unleſs the Stock be very large, or an old Tree you Graft) and if it put forth ſeveral Shoots, to cut off all but one, that is the ſtraighteſt and ſtrongeſt: But for Dwarffs and Wall-fruit, put in two Cyens if the Stock be big enough; let the later be Grafted near the ground, the former at ſuch height you think fit, and the Stock will allow.

The ſize of ſtocks to be Grafted.

§ 6. If the Plants that you removed out of the Seed-plot into the Nurſery, and ſuch Stocks for Stone-Fruit in the Seed-plot as you intend to Graft, be half an Inch over in thickneſs where they are to be Grafted, or little more, its enough; Its beſt not to have them above an Inch in the Diameter, both that you may loſe no time, and that the Stock may be eaſier cover'd by the Cyen or Graft. In the cleft you may Graft any Stock, that is a little above half an Inch, to three Inches Diameter at the place to be Grafted at; but one Inch Diameter of the Stock at the Grafted place is the beſt, *How to mark Trees to know and diſtinguiſh their kinds.*

§ 7. In Grafting or Inoculating its neceſſary to have ſome mark, to know what kind of Fruit is put upon each Stock: If you Graft many of one kind, (as it's neceſſary for Cyder-Fruit) you may obſerve to make every row to conſiſt but of one kind, and it's but entring in a Book, that ſuch a row hath ſuch a kind of Fruit in it, and no other; but where there are ſeveral in one row, there may be a Stake knockt into the ground, at the beginning of every new ſort, and ſo entred in your Book; and where you have very few of a kind (or for the whole Nurſery if you pleaſe) you may make marks of ſeveral figures or ſhapes in the Bark of the Stocks, which marks enter in your Book, and what kind it denotes, and at two or three years when you remove it, the mark will be very viſible, and by renewing the marks ſometimes, you may continue it as long as you pleaſe; and if any Tree be ſtolen, you may own it by the mark, which is made with the point of a Pen-knife by cutting almoſt through the Bark of the Stock, the form of a Letter or any other figure or character whereby to know the kinds of Fruits.

Buds on the Stock at Grafting not to be pull'd off untill the Graft put forth.

§ 8. Buds upon the Stocks that are engrafted, ſhould be let alone, all or moſt of them, untill the Grafts have put forth Buds of their own, and be able to draw up the Sap out of the Stock, and then rub off all the

Buds on the Stock, below the Grafts, that they may have all the Sap.

§ 9. Stocks that are white, when you Graft them will ſeldom make the Graft to grow well and proſper; the whiteneſs being cauſed through the barrenneſs of the Soil, and obſerve what length the Stock did ſhoot out Sprouts the fore-going year, and commonly ſo long will the Graft ſhoot out, or more, if it take well.

CHAP. III.

How to Graft ſeveral ways.

§. 1. THere are ſeveral ways of Grafting and all good, if Judiciouſly and dexterouſly performed: To which end, I ſhall endeavour to ſet down the moſt plain and exact deſcripition of each way, for the better and truer information of the young Planter, and firſt begin with that call'd ſlicing, or Packing on, which being deſcribed at large, may ſerve as a General direction for all.

Grafting call'd Slicing, or Packing on.

§. 1. Cut off the top of Stock, in ſome ſmooth and ſtraight place, that may be Anſwerable to the ſtraightneſs of the Graft, when ſet on. If you do it with a Hand-ſaw, cut it ſmooth afterwards with a Knife, leaving the top flat and even.

Then prepare your Cyen or Graft, (firſt obſerving which ſide is ſtraighteſt at the bottom or thicker end, that ſo it may fit the ſtraight part of the Stock when ſet on) by cutting the Graft or Cyen on one ſide only, from the Joint, Knot, or Seam, if the part below it be ſmooth and ſtraight; (the Knot or Seam is a Circle round about the Graft, dividing and diſtinguiſhing the laſt Summers growth from the former) or from ſome one Bud on the lower part of the laſt years Shoot, or Sprout, down ſlopewiſe in the Wood till it be cut quite off, in that the ſlope may be about an Inch long or ſomthing more, obſerving it's bent, that when the Graft or Cyen is fixed to the Stock, it may ſtand almoſt upright; and cut the Graft or Cyen thin at the bottom of cut place, yet leave on all the Bark on the oppoſite ſide; then give a cut croſs through the Bark at the top of the Slope, and then cut a thin Chip of that Slope upward to the croſs cut, that there may be a ſhoulder to reſt on the top of the Stock, but cut not this ſhoulder too deep, little more than through the Bark will be enough, and this will cauſe a little riſing in the Sloped part, which you muſt cut down, that the whole Slope may be plain and ſmooth, without dints or riſings, and lie even and cloſe to the ſide of the Stock. Cut then the top of the Cyen off, cloſe above a Bud, about four Inches above the ſhoulder if it be for a Standard-tree, two Buds above the Clay being full enough; but for Dwarf, or Wall-trees, you may let the Cyen or Graft be ſix Inches long with ſeveral Buds, that they may ſhoot forth many Branches, and ſpread from the very Stock.

The Cyen or Graft thus prepared, lay the cut part of the Cyen or Graft upon the ſtraight ſide of the Stock, and if it may be, on the Weſt, or South-weſt ſide of the Stock, and ſo meaſure and mark the juſt length and breadth of; it then cut away ſo much of the Bark of the Stock, as the cut part of the Cyen or Graft may fit, drawing your Knife upwards; but as the Stock is bigger, and the Bark thicker than that on the Cyen, or Graft, ſo the Chip muſt be longer and broader, or els the paſſage of the Sap in the Stock and Cyen or Graft (which is chiefly betwixt the Bark and the wood) will not meet together, which ſhould and muſt be aimed at, as in the work you will eaſily ſee.

Then lay the cut part of the Cyen or Graft on the cut part of the Stock, and let the ſhoulder of the Graft or Cyen reſt directly upon the top of the Stock, ſo that the cut parts of both may joyn even and ſmooth all along, and ſo bind them together cloſe, with courſe woollen Yarn, Baſſes, or the inward peeling of the Witch-tree, if you bind with ſuch materials as will not be looſe or rotten by Midſummer; about that time give the binding a cut croſs-wiſe with a Knife to ſet the priſoners at liberty: Have in readineſs ſome Clay free from ſtones, well mixt with Horſe-dung, *&c.* (*Vide* Chap. 2. *Sect.* 2.) and daub it about the Stock and Cyen, an Inch above the head of the Stock, and an Inch below the bottom of the Cyen or Graft; work it up round the Cyen or Graft till it be ſharp at the top, that the Rain-water may fall better off it; and with a Knife or rather a little Trowel dipt in water, ſmooth over the Clay, but in doing this, be very careful not to diſpleaſe the Cyen or Graft.

Thus you may Graft Pears, Plums, Cherries, and Apples, if it be before the Bark of the Stock will part from the wood of them, for when it will, the next way following is better for Aples.

Grafting in the Bark or Rind.

§. 2. The ſecond way call'd Grafting in the Bark is much like this, and ſome prefer it before the beformentioned, or any other way; but it can only be uſed for Apples, becauſe all Cyens of other Fruit, will be grown paſt uſe, before the Bark of the Stock will peel, which is about the end of *March* or beginning of *April*, but this will be time enough for Apples if your Stocks be in any thing good liking, which if they be not, they are not fit to be Grafted any way: Prepare then your Stock and Cyen or Graft, exactly as your were directed in Packing, only inſtead of cutting the Bark of the Stock, ſlit it on the South-weſt ſide, from the top, almoſt as long as the ſloped part of the Cyen, and looſen the Bark at the top of the ſlit with the point of your Knife.

Have in readineſs a little Inſtrument made of Ivory, or of a Deer or Sheep-ſhanck or Silver, or of ſome hard ſmooth wood; at one end let it be made of the ſhape of the ſlope part of the Cyen, but much leſs every way; thruſt it down betwixt the Bark and wood of the Stock where it was ſlit, to make room for the Cyen or Graft, then take it out and put in the Cyen, but firſt cut a little of the Bark at the thin end of the ſlope of the Cyen or Graft, that it double not in going down, yet leave it with a ſharpe edge; and becauſe when your Cyen is put in, it will bear the Bark hollow from the Stock, nick or ſlit the Bark, on each ſide the Cyen, ſo that it may fall cloſe to the Stock, and to the edges of the Cyen; bind and Clay it as before.

Some peel off the outmoſt thin, brown rind of the Graft, on the oppoſite ſide to the cut and ſlope part of the Graft, that muſt enter between the Bark of the Stock and wood, but leave on all the inner green rind, and then thruſt the Graft down between the wood and Bark of the Stock, which does very well.

This way of Grafting is commended by ſome, as *Mr. Langford*, tho others diſapprove thereof; yet I have Grafted large Stocks often this way, and very ſucceſsfully, but with ſmall Stocks I ſeldom had the deſired Succeſs, tho as careful in the operation as poſſible; but the firſt way I take to be the beſt for them, for theſe reaſons.

I. Becauſe Stocks may be Grafted ſo, ſome years before they can be ready to Graft in the Cleft, and though Whip-grafting may be uſed ſooner than that way, yet there are other great inconveniences attending it.

II. The Stocks this way are leſs harmed than where a Cleft is uſed, becauſe the Cleft lets wet into them, and rots and makes them not ſo fit for Grafting again, (if any fail to grow the firſt time) as theſe continue to be, though they ſhould once miſcarry.

III. The Cyen will much ſooner cover the Stock and make a more ſound, healthful and ſwifter growing Tree.

IV. This is more ſpeedy, eaſy, and ſure to ſucceed. Therefore if the Stock exceed three Inches Diameter at the place it's cut off, the beſt way is to Graft in the Rind or Bark, and you may ſet many Grafts round the Stock, and they will ſooner cover the Stock; but if the Stock be from one Inch to three Inches Diameter, then Graft in the Cleft; if under one Inch Diameter, then by ſlicing, Packing on, or Whip-grafting.

Grafting in the Rind is attended with ſome inconvenience; for the Grafts uſually make large Shoots the firſt Year, which in caſe the Wind happen to blow ſtrongly on the oppoſite ſide of the Stock where the Graft is, commonly it is broken off, having as yet no other hold than in the Bark or Rind, and being top heavy with all, is eaſily broken; but after one Year the danger is paſt, becauſe that which grows ſo plentifully at the joyning of the Graft and Stock the firſt Year being but ſappy Rind, the next Year is converted into ſolid Wood.

Some well approve by their experience the Grafting Stocks above three Inches Diameter, by placing two Grafts oppoſite to each other in the Cleft, and other two oppoſite to each other in the Bark, ſo that you may place four Grafts in ſuch a large Stock, and they will ſoon cover the Stocks head.

Whip-grafting.

§. 3. There is another way of Grafting ſmall Stocks call'd Whip-grafting;and here your Graft or Cyen, and Stock ought to be exactly of the ſame bigneſs as the manner of performing it plainly ſhews, *viz.* Slope off the Cyen or Graft a full Inch or longer, and do the like to the Stock, and tye the one upon the other;both the Stock and Cyen ought to be cut at the ſmootheſt and ſtraighteſt place. You may if you will make a Shoulder on the Cyen, and cut the top of the Stock to ſuit with it, and then bind them together, and Clay them about the place. If you joyn the Inner Bark of the Cyen and Stock exactly together at either ſide, it will grow, tho not ſo well as where the Cyen and Stock are of an equal proportion.

This way call'd Whip-grafting,is ſucceſsful enough, ſo that ſpecial care be taken that both Stock and Cyen ſuit exactly where they are joyned together, which is ſomewhat troubleſome to do; and ſo is it to find Cyens and Stocks of an equal bigneſs; beſides the head will be apt to overgrow the Stocks; all that can be done to prevent it, is to Graft theſe very low; or if high to give the Stock more liberty to thicken by ſlitting the Bark of it with a Knife almoſt to the wood.

In this way of Grafting there is another little Knack may be added to very good purpoſe, and that is, when the Stock and Cyen are prepared (as you heard before) to be joined together, to make a ſlit, or Notch with a Knife in the bare place of the Stock downward, beginning towards the top of the ſlope, and ſo ſlitting or Notching it a little way, and doing the like in the ſloped face of the Cyen, but beginning at the ſame diſtance from the lower end of it, as you did before from the top of the Stock, and ſo carrying it upwards, and then joyn them by thruſting the one ſlice into the other, till the bare place of the Cyen cover the bare place of the Stock.

This may be done likewiſe in Grafting by Packing, and in both conduceth much to ſtrengthen the work, and is called by ſome Lipping, or Tounging.

In Whip-grafting the cut parts both of the Graft and Stock, muſt joyn and anſwer one another from the top to the bottom.

This way of Whip-grafting is commended by ſome, not only for the ſame reaſon as ſlitting or Packing on is, but alſo becauſe the Graft ſoon covers the Stock, which is not impaired by ſlitting or cleaving, and the Graft having it's Wood, as well as it's Rind bound to the Stock, is not ſo apt to break off, as that which is Grafted only in the Rind, nor is the Graft apt to be top heavy, the Stocks being ſmaller afford not ſo plentiful Nouriſhment.

Grafting in the Cleft or ſlit.

§. 4. The next way of Grafting is call'd Grafting in the Cleft, which is the moſt Antient and common way of Grafting, and if carefully managed, not inferior to any other way of Grafting, tho the modern Planters do ſomthing ſlight it: You may Graft any Stock this way, from half an Inch to three Inches Diameter, and that if the Stock be no bigger than the Graft too, if you have neat Tools, and be ready in the managery thereof, and with good ſucceſs, as I have frequently experienced. The manner is thus, *viz.*

Cut off the top of the Stock in ſome ſmooth and ſtriaght place, that may be anſwaerble to the ſtraightneſs of the Graft that is put into the Cleft; if you do it with a Hand-ſaw, cut it ſmooth afterwards with a Knife, leaving the top flat and even.

Then cleave the Stock with a ſtrong Knife, (or the Chiſel before deſcribed at *Sect.* 2. in *Chap.* 2.) Let the ſlit run about two Inches deep, and let it be as near the middle of the Stock as you can, but not in the Pith or heart, and let the ſlit be on the ſmootheſt ſomotheſt ſides of the Stock. Have in readineſs the Steel Iinſtrument before mentioned at *Chap.* 2. *Sect.* 2, or els a Stick of hard Wood near a foot long, at one end made like a Wedge; when you have taken out the Cleaver, put one end of the Inſtrument, or els the Wedge into the ſlit or cleft of the Stock, and open it ſo wide as to put in the Cyen, when it is prepared, and made ready for that purpoſe.

Which is by cutting the Graft or Cyen from the joynt, knot, or ſeam, if it be ſtraight, or els from ſome Bud on the thicker end of the laſt years Shoot or Sprout down aſlope on both Sides, ſomthing more than an Inch long, making it thin at the bottom, and in ſhape like a Wedge, very ſmooth and even without dints or riſings, that it may joyn cloſe all along; ſo far as it goes into the Cleft of the Stock, let the outſide of the Graft or Cyen be ſomewhat thicker than the inner ſide, unleſs the Stock be ſo big as to pinch the Cyen or Graft much, then make the Cyen or Graft as thick on that ſide that goes into the Stock as on the outſide, which will prevent the Stocks hurting the Sappy part, and Bark of the Cyen or Graft, by preſerving the outſide from being pinched too much.

The ſlope cut off the Graft ſhould be an Inch and half long at leaſt, if the Stock be big enough to allow it.

You may let the Graft or Cyen have on the uppermoſt part of the ſlope, a ſhoulder on one ſide, or both, or neither; all theſe ways are uſed, but ſhouldering takes up more time, and makes the Cyen or Graft weaker, and ſo apter by chance to be broke off; then with your ſharp Pen-knife cut away any Jags, or roughneſs, or blackneſs that remains after cleaving, on each ſide of the Cleft of the Stock within, and ſo put in either one, or two Cyens or Grafts; if the Stock be large, place them ſo as the paſſage of the Sap betwixt the Bark and Wood both of the Stock, and Cyen or Graft may meet and joyn all along the Cleft as near as you can; for you muſt be ſure always to joyn the inner ſide of the Bark of the Cyen or Graft to the inner ſide of the Bark of the Stock all along the Cleft, that the Sap may come out of the Stock to feed the Graft and make it grow.

The Graft being thus placed in the Stock draw forth the Inſtrument, or Wedge, and Clay them cloſe on every ſide, and an Inch above the top of the Stock, and an Inch below the bottom of the Cleft, and keep Clay on about the Grafted part untill the Stock be covered with the Graft, and it will be the ſounder Tree.

If you put but one Graft or Cyen in (which is beſt unleſs the Stock be large,) then cut off a piece with a ſlope cut from the top of the Stock about an Inch and half deep on the worſt ſide of the Stock, the Graft being to be put on the ſtraighteſt and ſmootheſt ſide, in cutting the Stock thus, the Graft will cover over the ſooner.

Many cleave big Stocks croſſwiſe again, and put in two more Cyens; but cleaving hurts the Stocks ſo much that it's better (if you will have more than two Cyens in one Stock) Graft the other two in the Bark, according to the ſecond way of Grafting, but forecaſting one of them to be on the Weſt ſide of the Stock; But two Grafts are enough for any Stock.

It's an Erronious practiſe to ſet the outſide of the Stock and Graft even and ſmooth; becauſe the Bark of a big Stock is much thicker than the Bark of a ſlender Graft, and conſequently if the outſide be ſmooth and even, the inſide muſt needs be uneven, but where the Graft and Stock are almoſt of an equal proportion, there you may ſet them ſmooth on the outſide, but where the Stock is large, ſet the cut part of the Graft more inward into the Cleft of the Stock.

When you cut Grafts it's very convenient to leave a Bud or two on the outſide of the cut place, that in caſe any of the Grafts happen to be broken off, ſuch Bud or Buds on the outſide, will ſpring out, and ſupply the defect, altho the Graft be broken off, even to the top of the Stock; or you may leave the Bud juſt at the ſhoulder where the Graft joyns to the top of the Stock, and it will anſwer the ſaid intentions.

The only objection that is raiſed againſt Grafting in the Cleft, is, that the Stock being ſlit or cloven, the Rain is apt to get in and decay the Stock, and ſometimes the Graft too; therefore caution muſt be uſed, not only the firſt year, but untill the head of the Stock be covered with the Graft, to keep well tempered Clay on the Grafted part both, of Cyen and Stock, and that as far as the Cleft extends it ſelf, to keep out both Wet and Air.

I have Grafted this way Stocks from half an Inch to above three Inches Diameter, and that very ſuccesfully, obſerving the aforeſaid rules, but a Stock of about an Inch Diameter is the beſt to uſe in this way of Grafting, which I like as well as any other, notwithſtanding the opinion of all modern Planters is to the contrary.

There is one ſmall obſervation neceſſary to be noted in Cleft-Grafting, and of no little concernment to make Grafts thrive well, which is to cut the Graft ſo as to be ſet as deep into the Stock as poſſible, ſo as the Stock be not clove too far, which is by making the cut part of the Graft to be an Inch and half long, or longer if the Stock be large, and thereby the Graft will attract more Sap, and make a larger Graft by much, than one cut but ſhort from the Knot, Seam, or Bud. Therefore for that end make the cut part of the Graft an Inch and half long at leaſt.

§. 5. Side-Grafting is done by preparing the Cyen or Graft as in Whip-grafting, then without cutting off the head of the Stock, (but making it thin of ſide-Branches) from a ſmooth Place of it on the Weſt ſide, take off as much Bark as the Cyen will cover, as in Packing, and ſlit both Cyen and Stock accordingly as is directed in the third *Sect.* and fix them together accordingly; bind it cloſe, and Clay it. *Side grafting.*

If it grow at a years end cut off the top of the Stock at the Grafted Place ſlopewiſe, and Clay it.

Some done thus grow well, but ſuffer not the top of the Stock much to overgrow the Cyen the firſt year before it's cut quite off.

Some uſe another way, that is, to ſlit the Bark of the Stock in the form of a great T, and looſning it with the point of a Knife, and then clapping in a Cyen, prepared as hath been ſaid before, (but without the ſlit for Lipping) bind and Clay it; this can be only uſed when the Bark will part from the Stock.

Grafting by Approach. §. 6. There is another way call'd Grafting by Approach, Ablactation, or Enarching, which is by having a Stock or Stocks grow ſo near another Tree, whoſe Fruit you would propagate, that the Stock and the Branch of that Tree may be joyned together in the manner following.

Cut the ſide of the Branch, and of the Stock (where they will meet) about three Inches in length, till you come near the Pith of each, and fit them both together, that the paſſage of the Sap may joyn, and the green inner ſide of the Bark of the Stock and Tree; in which poſture bind and Clay them: Aſſoon as you find the Cyen and Stock to be well cemented together, cut off the head of the Stock about four Inches above the binding, and in *March* following, cut off the Stub you left of the Stock, and alſo the Cyen underneath, cloſe to the Grafted place, that it may ſubſiſt by the Stock only.

It is alſo uſed to be done by cutting off the head of the Stock at firſt, and ſlopeing half off about two Inches long, and joyning the Cyen thereunto, being cut accordingly.

This manner of Grafting is unneceſſary, and ſcarſly practicable in common Fruit-trees, but for Oranges, Lemons, Pomgranats, Vines, Jeſſamines and ſuch like Shrubs, it may be uſed. Alſo it's ſaid that

Trees of different kinds will ſooner take this way than any other.

§. 7. I once ſaw a man Graft half a dozen ſmall Stocks thus; After he had cut off the top of the Stock, he cut it on each ſide from the top a ſlope about an Inch and half, directly like a Wedg reverſt, then he clove with his Pen-knife the Graft from the bottom in the middle of the Graft an Inch and half, then he plac'd this Graft on the S ock, one ſide of the Graft on one ſide of the Stock, and the other on the other, but joyn'd Sap to Sap, and then bound and Clayd it; theſe Grafts took well, and it's an eaſy way of Grafting.

§. 8. Some have an Iron Inſtrument made for the purpoſe, which will make a Nick or Notch in the Stock up to it's head, an Inch and half long through the Bark, and ſome depth into the Wood, in form of an v, or rather after this form, V, then fit the Graft, and put it into the Noch, joying Sap to Sap, and bind them together with Baſs, and Clay them. This way is much commended.

CHAP. IV.

Of Inoculating.

§. 1. INoculating is the taking off a Bud from one Tree, and putting it between the Bark and the Wood of another Tree or Stock; the end and intention is the ſame with other ways of Grafting; and moreover by this way, divers ſorts of Fruits, which are not apt to take or grow by ordinary ways of Grafting, are by this eaſily encreaſed.

The manner of Inoculating.

§. 2. About a fortnight before or after Midſummer (which is the beſt time, though it may be done from the beginning of *May* untill *Auguſt*) when you have pitcht upon ſuch Stocks as are fit to be Inoculated, to get the Bud from, chooſe out a ſtrong and well liking Branch, or Shoot of that years growth, upon a Tree that bears exceeding well, and ſuch kind of Fruits as you would by this operation produce, and about the middle, or lower end of it, (for the top will be too tender) fix upon a leaf that hath a freſh and fair Bud growing out betwixt it and the Bark, and about half an Inch below and above the Bud, cut off the Branch, and ſo you will have a piece of it about an Inch long remaining, with a Bud and Leaf on, this you muſt cleave juſt through the midſt, ſo as the Bud may be directly in the middle of the one half; and then ſnip off a part of the Leaf; and holding it by the remainder, clap it to a ſmooth Straight place on the Stock, and with a Pen-knife ſcore out, on each ſide of it, ſo much of the Stock as it covers, or rather a little broader, (becauſe when the Bark on which the Bud is, is taken off from it's own Wood, and applyed to the Stock, it will cover a wider ſpace of the Stock than it did before) After you have thus marked your Stock, with-draw the Cyen again, and cut the Bark through where you had marked it; then cut the Bark croſs and ſtraight from the uppermoſt end of one ſcore to the upper end of the other, and cut the Bark again croſs and ſtraight from one ſcore to the other, but not ſo low as the Lower ends of the ſcores, by a quarter of an Inch; then take the oblong ſquare piece of Bark, that is cut on every ſide, quite off the Stock, and raiſe up that part of the Bark that remains betwixt the ſide-ſcores at the bottom of the work, from the Wood, till you come to the lower end of the ſide-ſcores.

Take then a Gooſe-quill, cut in the faſhion of an Apple-ſcoop, or ſcraper, and having with your Nail a little looſned the upper part of that Bark that is on the Cyen, thruſt the Quill betwixt the Bark and the Wood, that it may ſeparate them, and take off with the Bark a little Wood or Root of the Bud over againſt it: If you ſee a hole on the inſide overagainſt the Bud, when you have taken the Bark off, caſt it away, that little labour is loſt, and try another till you find it otherwiſe.

Then put in the lower end of that Bark or Cyen betwixt the Bark that was raiſed on the Stock and the Wood, and ſo bind it on the Stock gently with Woollen-yarn, or narrow Shreds of Linnen Cloth, or gentle Stuff, or with Baſſes, or Baſt, of which the Ruſſia Matts are made, but ſo that the Cyen may Lye cloſe to the Wood of the Stock that was made bare, and have an eſpecial care that you hurt not the Bud.

§. 3. There are ſome other ways of Inoculating uſed, differing only in the manner of the cut, both in the Bark of the Stock, and of the Cyen.

And firſt, ſome proceeding in all other things, as is before directed, cut the Bark out of the whole length of the ſide-ſcores, and apply the Cyen to the disbarked place.

§. 4. Others cut one ſlit only down the Bark of the Stock, and another croſs the the top of it, like a great T, when this is done, they prepare the Cyen or Bark as before directed (only cutting it ſharp pointed at the lower end before they take the Bud off it's Wood) Then raiſe the Bark of the Stock up on each ſide the ſlit, and put in the Cyen, beginning at the top and ſliding it downward gently, and let the top of the Bud joyn cloſe to the croſs-cut in the upper end, and ſo bind the Bark gently upon it, but not juſt upon the Bud: This is the common way uſed by Gardiners.

§. 5. Others make the croſs-cut in the middle of the downright ſcore on the Stock, and lifting up the four corners of the Bark, and making the Cyen ſharp at both ends, put it under the Bark of the Stock at both ends, and then bind it; but in doing this, there is danger of hurting the Bud or Cyen.

§. 6. Mr. *Rea* commends the making the croſs-cut at the lower end of the downright cut, and having opened the ſides, put in the Cyen upwards, being made ſharp at the upper end only.

You muſt be nimble and quick in Inoculating, and preparing the Bud, els the Air by ſudden drying the Bud or Cyen and the cut-part of the Stock will much be hurt.

Thus much to ſatisfy the curioſity of ſuch as have a mind to make tryal of every way, but the firſt is eſteemed beſt.

Neceſſary rules and obſervations on Inoculaing.

§. 7. Leſt one Bud fail, or any miſchance break it, put two in every Stock, but not directly under one another on the ſame ſide of the Stock. The Branch or Shoot, you cut one Cyen off may yield you ſeveral.

§. 8. About a Month after the Inoculating, or ſooner if you perceive the Bark ſwell where the binding is, cut off the binding.

If it grow it will fix to the Stock, keep it's colour, and that part of the Leaf and Stalk that was left, will drop off, and the Bud appear fair; Then ſometime before the next Spring, cut off the top of the Stock a hands breath above the place it was Inoculated at, and all the ſide-branches that grow any where upon the Stock; and at Spring the Bud will put forth; and if any other Sprouts or Buds appear on the Stock, cut them off.

§. 9. If the firſt Inoculation fail, or the Buds dye, the Stocks may be Inoculated again the next Summer, and of ſuch as are Inoculated timely in the year, it may be ſometimes ſeen whether they grow or not, time enough to Inoculate them again the ſame year.

§. 10. Apricocks will have Buds ready ſooner than other Fruit, ſo that you may begin with them and follow with the other.

§. 11. Stocks raiſed of Peach-ſtones are commonly big enough to be Inoculated the ſecond Summer, ſometimes the Firſt after they are ſet: when they or any other Stocks are an Inch and half in compaſs, or thereabouts, they are big enough to be Inoculated.

§. 12. Thoſe you intend for Wall or Dwarf-trees, are to be Inoculated within a handfull of the ground, and not Pruned at all, till you remove them, and then you will better ſee whats neceſſary to be cut off; and theſe you may remove after one years growth, or two, with more ſafety.

If you Inoculate any Plums, Pears, Cherries, or other Fruit, that you intend for an Orchard, or other place for tall Standards, you may do it higher on the Stocks, *viz.* ſix or ſeven foot high, and Prune theſe up in the Nurſery, and let them grow there, two or three years (according as they grow in hight) before they be removed.

§. 13. After Stocks that are Inoculated have made one or two years growth, you muſt cut off the head of the Stock, that remain'd above the Bud: At your firſt cutting it, cut it cloſe to the new Branches, that it may grow over the cut; let it be cut a little ſlope, and Clay'd over , if you deſire the Branch ſhould quickly cover it; and the ſooner it doth the better.

§. 14. Care muſt be had in chooſing Branches or Shoots from which you are to have your Buds, that they be of Shoots of the ſame years growth you Inoculate; and of ſtrong growth,the Bark firm,and not ſpungy; ſuffer them to fade as little as may be before you uſe them; and the Shoots muſt be got from Trees that your own or others experience can faithfully aſſure you not only to be good Fruit, but very good bearers; and if the Fruit you deſign to raiſe, be at ſuch a diſtance that you cannot have Buds to Inoculate the ſame day they are cut, put them in wet Moſs or Graſs in a Box, and ſo they will keep a day and a night very well. But if by carriage in the Air or otherwiſe they are a little withered, you may revive them by ſetting them in water, which will make the Buds come cleaner from the Wood.

§. 15. Nectarins, Peaches, and Apricocks are ſeldom raiſed otherwiſe than by Inoculation; becauſe they will rarely or never grow by Grafting; but Pears, Cherries, or Plums take and grow full as well by Grafting as Inoculation. The Bark of Cyens taken from ſome Plums, is ſo tender and ſpungy they will often miſcarry when Inoculated: ſuch one be ſure to raiſe rather by Grafting, tho many Plums will hit very well being Inoculated.

Cyens of Apples fail for the moſt part, when you Inoculate Buds of them, becauſe their Bark is tender, and Buds weak.

Cherries and Pears take very ſure being Inoculated on young freſh Stocks, whoſe Bark is not very thick.

§. 16. Upon conſideration of all, I adviſe the Planter to raiſe all his Fruit-trees by Grafting, as being both the ſureſt and eaſieſt way; only his Peaches, Nectarins, and Apricocks can be propagated only by Inoculating; yet where Inoculating ſucceeds well, it's eſteemed and prefer'd before Grafting, for the following reaſons. 1. Becauſe the Stock will be big enough to Inoculate by two or three years ſooner than to Graft, and your Plant groweth much faſter after the nature is ſo alter'd than it did before, and will be ſooner ready to tranſplant than if it be ſuffer'd to grow two or three years longer, as it muſt be before it be ready to be Grafted. 2. It makes a ſounder Tree than one that is Grafted, eſpecially in the Cleft; becauſe it covereth the Stock ſpeedily and well. 3. It hurts not the Stock ſo much as Grafting; and if it chance to fail, it may be Inoculated next year again, and ſometimes the ſame year. 4. Some look upon Inoculating to be more ſpeedy, eaſy and delightſome than Grafting, and may be practiſed by Gentlemen, who in *June* may lye on the ground and do it; whereof they cannot ſo well bear the cold without danger of taking hurt in *February*, or *March*, which is the choice of Grafting ſeaſon.

If you do Inoculate any Buds of Pear, Cherry, or Plum, let the Shoots be very ſtrong and large, but you had better Graft them.

§. 17. Not only the Pith, but alſo the Wood of the Bud is caſt away in Inoculating, and nothing made uſe of but the Buds and Bark of any young Shoot, and yet they bring forth the ſame Fruit as the Tree whence they are got.

Time of the day to Inoculate.

§. 18. It's debated among Planters what time of the day is beſt for Inoculating; ſome perſons argue ſtiffly for the morning; becauſe there paſſeth up much more Sap or juice in the day-time than in the night, as they obſerve in piercing the Birch-Tree, and other Trees to get the liquor out of them for Phyſical uſes; and conſequently the Bud Inoculated in the morning, muſt be more likely to grow, having the whole days plenty of Sap to invite it to unite with the Stock, than if it be Inoculated late in the day, and ſo muſt be diſcouraged in it's new habitation by the niggardly proviſion of the nights Sap.

If you follow this advice, you had beſt wrap ſome broad Leaves or Fern about the Stock; ſo as to ſhade the Cyen from the Scorching heat of the day following, to prevent it's drying before the Stock hath undertaken the charge of preſerving it.

But this work may be done in the heat of the day, if the heat be not violent, and then you muſt (as at all times you ought) be very quick in the doing of it.

And for all that hath been ſaid before, the afternoon may be as good a time as any; becauſe if the Bud have leſs liquor afforded it in the night, then the coolneſs of that time makes it leſs thirſty; and as it's thirſt encreaſeth by the heat of the next day, a more plentiful Stream will be very ſeaſonable to ſatisfy it.

CHAP. V.

Of Pruning Fruit-Trees.

§. 1. AFter Grafts have had their full growth the firſt year, they muſt be Pruned, ſuch as need it; Thoſe that are Grafted low and yet muſt be made Standards, or tall Trees, leave only one Shoot, the ſtrongeſt and biggeſt, and let not that Shoot begin to ſpread untill it be ſeven foot high at leaſt; therefore cut off all the ſide-branches, till they are grown to the hight you deſire. If to ſpred low, let ſome be left on each ſide, that the boughs on any one ſide may grow ſtraight upright. As for Wall-plants it's no matter of how many Branches they ſpread, the more the better. Now unleſs young Grafts put forth a ſtrong and luſty Shoot, Prune not off all the ſide-branches, leſt the body of the Plant be too ſmall and limber to bear his head; therefore if the body be very ſlender ſuffer ſome of the ſide-twigs to grow, untill the Body be of a ſufficient ſtrength to bear the top, and from year to year Prune off thoſe Shoots and Branches as are ſuperfluous,

perfluous, and grow too near one another, interfere, fret and gall each other, and preſerve only ſuch as are fit to make the Tree of a comly form; and ſuffer them not the firſt three years (at leaſt) to grow thick and buſhy-headed, by cutting off ſome of the inſide-ſhoots, and ſuch as grow croſs one another, or pendent.

§. 2. What you cut off the Body, or any Branch, do it cloſe and even, that the Bark may grow over it.

§. 3. If you cut part of any Shoot, or of a Cyen for Grafting, cut it cloſe at a Bud, that the cut may be cover'd with a freſh Sprig, and the wound may again grow up, and a Stub-end not be left behind.

§. 4. At what hight ſoever, or whereſoever you would have the Tree, or any Branch, or Shoot to ſpread, there top it, that is cut off a Bud, an Inch of the very top cloſe at a Bud, and there it will ſpread.

§. 5. When Trees grow big that a Knife will not Prune them, uſe the broad Chiſel (mention'd in *Chap.* 2. *Sect.* 2.) with which, and a Mallet, you may take off a Bough or large Branch, as you will, without either hurting the Bark of the Tree, by cutting too near, or leaving a Stump, by not cutting near enough; one of which is not eaſily avoided by the chance blows of an Ax, or Hatchet, and being amongſt thick boughs your Chiſel and Mallet will be more governable than other Inſtruments; If the boughs are very large you may uſe a Saw firſt, and then ſmooth it with the Chiſel.

§. 6. Trees growing in Orchards, Fields, or Hedges, *&c.* muſt be Pruned from year to year as need is, in *November*, or *December*, by cutting off ſuperfluous Branches and ſuch as croſs one another, and grow too cloſe; leave no dead Twigs or Branches, and ſcrape off the Moſs on the body, or Branches of the Tree.

§. 7. Concerning the Pruning and ordering of Wall-trees, ſee hereafter, *Chap.* 10. And you muſt not Prune thoſe Plants you intend for the Wall, untill tranſplanted and ſet at the Wall.

§. 8. Prune not much and often, if you love Fruit more than a Tree to thrive in Wood; therefore whilſt your Tree is young, bring it unto a handſome ſhape and order, and when it comes to bear Fruit forbear Pruning, unleſs in caſe of broken, or ſuch boughs as grow croſs, or gall, or fret others.

Touching the height of Fruit-trees.

§. 9. And here I muſt beg leave to thwart and contradict the opinions of all our modern Planters, who applaud the making Trees not to be above an ell high before they ſpread: Their reaſons are theſe that follow. 1. Becauſe the low Trees ſooner attain to be Fruit-bearing Trees, and grow fairer than the tall; the Sap and juice waſting in its long ball and paſſage, which in the ſhorter Trees expends it ſelf ſoon in the Branches. 2. You may Plant more of them in the like quantity of Land, becauſe the ſhadow of the one Tree doth not reach the ground of the other, as that of the tall Tree doth. 3. The lower and broad ſpreading Tree is the greater bearer, by reaſon the bloſſoms in the Spring are not ſo obvious to the bitter Blaſts, nor the Fruit in the Autumn to the fierce and deſtructive Winds. 4. Fruits are more eaſily gather'd from a low than a tall Tree, beating or ſhaking down Fruit from ſuch Trees being to be rejected by all judicious Cyderiſts. 5. Any Fruit on a low well ſpread Tree, is better and fairer than that on a tall Tree, by the ſame reaſon that the Tree is fairer, becauſe the Sap is not ſo much waſted in the low and humble Tree, as in the tall and lofty by its large Trunck.

Notwithſtanding theſe reaſons ſeem plauſible, yet experience aſſures, that a Tree of a reaſonable height (I mean not high like Tymber Trees) bears as well as the lower, er, and if you obſerve a due diſtance, which ought to be, the ſhade will not be injurious; and tho Fruit on a low Tree is eaſily gathered, yet the other may be with ſome little pains gathered well enough.

But if you deſign to uſe the Land under, or about the Trees you plant, either in Orchard, Field, or Hedg, for the Syth, Spade, or Graſing of Cattle eſpecially, let your Trees be ſeven foot high at leaſt before they begin to ſpread, becauſe you can ſcarce ſo cautiouſly preſerve them, but Cattle will ſomtime or other get into your Orchard, and then they will not a little endamage your Fruit-trees, if low, by nipping off the Buds of all boughs within their reach; and if you chance to farm the Orchard, your Tenants in deſpight of all Covenants to the contrary, will either be negligent, malitious, or ſo covetous as to permit Cattel to Graze in the Orchard, to your no little damage, which by letting them be ſeven foot high before they begin to ſpread, will be infallibly prevented. But where you intend Trees for Table-fruit to he ſet in the Borders of Gardens or Walks, there you may let them ſpread within an ell and leſs of the Earth, as you ſhall hereafter be more fully inſtructed.

§. 10. In Pruning Trees be cautious of cutting off the ſmall Sprigs, which are the more apt to bear Fruit, it being too uſual for ignorant Planters, to beautify their Trees, by taking off theſe ſuperfluous branches (as they term them) whereby they deprive themſelves of the Furit.

§. 11. Cherry-trees muſt be Grafted at the hight you would have them ſpread, about ſix or ſeven Foot high, unleſs for the Wall, and then within a Foot of the ground.

§. 12. Prune the Heads of ſome ſort of Trees that have but ſmall Pith as Apple-trees, Pear-trees, *&c.* when you remove them, to proportion the Branch and Root as near as you can; but Cherry-trees, Plum-trees, Walnut-trees, *&c.* that have a large Pith are not to be top't, only ſome of the ſide Branches may be taken away.

If you cut part of any Shoot, or a Cyen for Grafting, cut it cloſe at a Bud or Sprig, and the wound will again grow up, and a Stub-end not left behind.

CHAP.

CHAP. VI.

Touching the Diſtance of Fruit-Trees.

§. 1. THe diſtance of Trees in Orchards ought not to be leſs than eight Yards, neither need it be more than 13, or 14; the richer the Land is, the greater diſtance you ought to ſet the Trees at from one another, to which you ought to have reſpect, and alſo to the kinds of Fruit-trees you plant; for ſome Trees take up more room than others, as moſt Apple-trees more than Pear-trees, and ſome Apple-trees more than others, according to their aptneſs to grow more or leſs, too tedious and difficult to be here related; only the Red-ſtreak being Generally a deſired Fruit, you may take notice that it's one of the leaſt Apple-trees; where it yields the beſt Cyder, ſomtimes it's almoſt but a Shrub, the Winter Pear-main, Golden-renating, and John-apple, are Trees that ſpread not much, but the Gregory-pippin, a Fruit-Tree in *Lancaſhire*, is a mighty ſpreader, even on courſe Land, grows well and quickly, and

Diſtance of Orchard-trees.

is an excellent Fruit for any uſe, and th Trees great bearers, and the Fruit will eaſily keep untill the following *May*.

Diſtance of Wall-trees.

§. 2 As to the diſtance Wall-fruit-trees are to be ſet at, where they are to grow, you may learn that beſt by conſidering their aptneſs to ſpread; Apricocks and ſome other kinds of Plums ſpread moſt, the *May* Cherry, and ſome others are of a very ſmall growth, it's impoſſible to give Rules for all, but the general diſtance is about four yards aſunder.

Cherry and Codling Hedge diſtances.

§. 3. Of late times it's uſed to make Cherry-hedges in Gardens and Orchards, and Hedges of Codlings, Nurſ-gardens, Plums, and ſuch like Trees that may be kept by cutting and plaiſhing one Branch within another, and from growing very large; theſe are uſually made along the ſide of Walks, or round about a Garden-plot, and are Ornamental to a Garden being ordered and kept handſomly.

Trees for theſe purpoſes are to be ſet about a yard, or an ell aſunder; for they ſhould near meet the firſt year, and ſhould be thus ordered, *viz.* ſtretch a line from one end to the other where the Hedg is to be made, and ſet the Trees ſtraight at the diſtance aforeſaid: Afterwards knock down a Stake betwixt each Tree, then having ſtraight long Rods, or Poles of Aſh, or the like; tye a row of them from one end to the other (about a foot from the ground) faſt to the Stakes with Oſiers, or ſuch like, or elſe nail them, which is better, and another row of Rods a foot above them, and ſo a third if need be, according to the height of the young Plants; Having thus done ſpread and tye the Branches of the Twigs of the Trees in order to the Poles, but not too hard, and draw and faſten ſome of them down cloſe to the ground, that ſo there may be Bloſſoms and Fruit from the bottom to the top, which will be a beautiful ſight in the Spring and Summer: Then after a few years the Stakes and Poles may be taken away, and the Branches platted and woven one within another from year to year, and the ſuperfluous ones cut off.

Reaſons for a large diſtance in ſetting Trees.

§. 4. For many reſpects Trees ought to be planted at a large diſtance, eſpecially for the following reaſons. 1. The Plantation will be little Annoyance to the Land, if either you ſet Gooſ-berries, Currens, Raſberries, Straw-berries, or Garden ſtuff in it; ſow Corn on it while the Trees are young, or graze it when they are grown up. 2. Whereas ſome ſay the more Trees the more Fruit; that's abſolutely falſe; for when they are ſet ſo cloſe, that the Sun cannot have a good influence on them, by refreſhing the Roots, Body, Branches, Bloſſoms and Fruits, they bear poorly, and ripen worſe; and cloſe-ſet Trees in a few years when they ſhould bear Fruits, croud, fret, and gall one another, and by rubbing often cauſe the Canker. 3. They cannot grow to be Trees of that ſize as they would (if the Land be good) being ſet at a good diſtance, and ſome kind of Trees being of ſtronger and ſwifter growth than others, will ſo domineer over their neighbors, that they will make them almoſt good for nothing; and one Tree that is ſet at a fair diſtance will bear oftner, and more Fruit than three, or four Trees ſet cloſe, as is dayly ſeen by ſome Apple-trees that grow ſingle, or in a Hedge. 4. You may Plant betwixt every Tree, a Cherry-tree, Plum-tree, or Codling-tree, which may grow up and bear with the other Trees many years, and never reach or Prejudice them, but will decay before the others are at full growth; Or you may ſet a young Apple-tree, or Pear-tree betwixt every two of your Standards that you ſet in the Orchard, and nurſe it up with neceſſary dreſſing and Pruning ſeven or eight years, or leſs time, to tranſplant into Fields or Paſture-land, where Cattle feed; whereby with little help it will not be in ſuch danger of hurt from Cattel as ſmall ones would, and bear Fruit ſoon after it's ſet, and you cannot let them grow ſo long in your Nurſery without galling, fretting, or hurting one another, unleſs when you remove Trees out of your Nurſery, you take care to leave every other Tree, whereby they may have liberty to grow big, and ſo more fit for your Fields.

As for Standard Cherry-trees, Plum-trees, and the like, ſix yards diſtance is the moſt convenient, unleſs the ground be exceeding rich, and then a greater diſtance, as ſeven or eight yards aſunder.

CHAP. VII.

Choice of Ground for an Orchard, and the ordering it.

SO far as it lyeth in ones power to chooſe a plot of Ground for an Orchard, let it be done with reſpect to the following advantages

§. 1. It ſhould lye conveniently near him, declining and lying open towards the South, South-eaſt, or South-weſt, and defended from the North, North-eaſt, and North-weſt Winds by buildings, Woods, or higher Grounds; the Land ſhould rather incline to dryneſs than moiſture, without Springs, the Soyl deep and a fat Earth, not a ſtiff, cold Clay, or binding Gravel, nor a light, ſandy, esky or hollow Earth; yet with good Husbandry, if it run not into the extreams of any of theſe, Fruit-trees may proſper reaſonably well in it.

§. 2. The natural Soil for an Orchard is more to be reſpected than a Garden; for the Garden Fruit-trees, and what els groweth there, rooteth little deeper than it may be eaſily manured; but Pear-trees and Apple-trees in Orchards ſhould grow to be large Trees, and therefore ſend forth Roots broad and deep, ſo that it tranſcends all coſt and pains to enrich the Ground for them, as far as the Roots every way reach.

§. 3. But they that are ſeated or fixed in any place, and cannot conveniently change their habitation, muſt be content with their own, and if any defect or diſadvantage be in it, it may be it hath ſome advantage that another wants, if it lye to the North, the Trees Bud and Bloſſom the later, and many times the Fruit thereby ſucceeds the better, and is free from the injurious South-winds in the Autumnal ſeaſon.

§. 4. If it lye to the Eaſt, it hath not only the advantage of being later Budded, and blown, becauſe of the cold Eaſterly Winds in the Spring, but the Fruit ripens the better, the morning Sun in the Summer being by much the beſt, and the Fruits freed from the Weſtern Winds, which with the South are the worſt.

§. 5. If your Land be on a dry, or riſing Ground, you may Plant them the thicker, which will cover and ſhade the Ground the ſooner, and make them bear the better; the Fruit will alſo yield a more vinous Liquor.

§. 6. If your Ground lye in a cold moiſt Vale, the ſooner may you raiſe a natural Fence about it, to defend your Trees from cold Winds, and ſtiff Guſts, which diverſly anoy your Trees and Fruits; and I once knew a perſon that had a cold moiſt flat ſpringey plot of Ground, who cauſed double Ditches to be made therein, at ten yards diſtance, each from other, and about an Ell high; upon theſe Ditches he planted Apple-trees each ten yards diſtant from another, which Trees did grow, proſper, and bear exceeding well.

§ 7. But if you have liberty to chooſe what Land you will for Planting of Fruit-trees, obſerve the directions given in the firſt *Section* of this *Chap.* and chooſe a warm, light Rye-land, or either a black or brown mold, if with a mixture of Sand, ſo much the better, but the heavy cold and moiſt Wheat-land is not ſo good.

§. 8. If the Ground be very light and rich of it ſelf, or ſo made by improvement, ſeveral ſorts of Apple-trees, eſpecially the Pippin, will be ſo apt to canker, that they will ſcarce ever be large Trees; therefore a firm and ſtrong-Land, is beſt for Winter or long laſting Fruit; but for Summer-fruit, Land cannot be too light; the more it inclines to redneſs the better.

How to qualify the Ground.

§. 9. If the Land you intend for it be a Turf or Green-ſward, you ought to Plow it two years before you ſet your Trees in it, to make it mellow and looſe, that the Trees may the better take Root, and you may then lay on Manure, which by Plowing will be well mixt with the natural Soil, and uſe ſuch Manure as will beſt ſuit to amend it; and if you ſow the Ground about ten days after the Midſummur before you Plant, with Turneps, and when they are got off, which will be about *November*, if you pleaſe, then ſet your Trees, they will like well.

§. 10. Where the natural Soil is not good of it ſelf, whether it be in Garden, Orchard, or Field, there it ought to be by skill aſſiſted and better'd, at leaſt wiſe for ſuch a compaſs as the Roots of every Tree take up for ſome time, if not ſo far round as they are ever like to extend themſelves.

And this muſt be done by mixing ſuch Manures with the Soil as ſuit beſt with it's temper. If the Soil be Clay, or Clay mixed with Gravel or wet heavy Land, hot Dung, as that of Horſes, or Poultry, or for want of that, of Oxen or Cows is beſt to mix with it, to bring it to a due temperament.

And if the Soil be light, hollow, esky, or ſandy Land; Marl, Mud out of a Pond, Ditch, or River, or ſhovelings of Dirty yards or Highways, if they be not Sandy, and be well Mellowed, by lying on heaps, and eſpecially if thoſe heaps are mixed with Lime, are proper to mend it.

If this laſt Soil be barren likewiſe, you may properly add a mixture of Neats Dung.

It hath been ſeen that an Apple-tree on a Hemp-but, which was conſtantly Plowed, and Manured to a great richneſs, bore more Apples than four ſuch Trees in an Orchard would do; and it's conſtantly ſeen in Barren hungry Land, Trees thrive poorly, grow Moſſey, or Bark-bound, bearing ſeldom, and that a poor Fruit: Only Walnut-trees and Pear-trees do not neceſſarily require a very rich Ground, and will proſper beſt on Stony, and light Land.

If your Land be too rich (which is ſeldom ſeen) you may mix Coal-aſhes with it.

§. 11. If your Land is very flat, that wet is apt to ſtand upon it, or be a ſhallow Soil, you may ſomthing help it in Plowing, alſo by gathering the Land always up in and near the place where you intend the Rows of Trees ſhall afterwards ſtand, which in two years time will ſomthing raiſe it, and thicken the Soil, and the Furrows ſo made will help to carry off the Water, or which is better, raiſe the Land on broad Ridges, that the middle of them may be about 24, or 30 Foot diſtance, according as you intend to Plant your Trees: Let the Intervals between the Ridges be about eight Foot broad, and the Earth taken up between, about a Foot deep, and caſt on the Ridges which will make the Ground thicker of the beſt Soil than before it was, that the Roots of the Trees you Plant on the Ridges cannot run down, nor ſpread into the bad Soil, which otherwiſe it would do; by this means the Trees will thrive and proſper well, as may be perceived on the Banks of ſome Land, and the Hedges, that Apple-trees will thrive better there than on the Level-land. *Moiſt Land to order.*

§. 12. If it be a Springey moiſt or ſpewy Land, you muſt Trench it at the head of the Spring, and that deeper than the chanel of the Spring runs in the Earth, which you may leave open, and yearly cleanſe, or fill it up with Alder or Oler-boughs, and *Moiſt Land to order.*

cover them with the Turf and Earth that came forth, much higher than the other Land; for the Wood and looſe Earth will ſink very much by degrees; or you may dig ſeveral narrow Trenches, one between each Row of Trees, deſcending to ſome Ditch at the lower end of your Ground, and lay in the bottom of it Alder-frith, or Faggots of Beech, and fill the Trenches again on the ſaid Frith or Faggots with Earth, as aforeſaid, and the Water will inſinuatingly paſs through the ſaid Wood to the lower ſide of the Ground, leaving the reſt dryer; but if you cannot eaſily do this, order it as at the foregoing *Section.*

§. 13. If it be Springey, but only lye ſo low and flat that in the Winter Rain or Land-floods will lye upon it, and that it hath been lately Plowed, or that you'l not loſe two years time by Plowing it before you ſet your Trees, or if it be ſhallow or ebb Soil, you may ſet your Trees by Tumping.

Hot dry Land to order.

§. 14. If your Ground be a hot dry Sandy ſhallow Land, Marl laid on the ſurface and there ſpread, will cool, ſadden, and make it rich; or if you can, cauſe the Current of ſome Rill of Water, or rather Water that runs from Pools, Ponds, or Dunghills, to over flow it ſomtimes, which will not only moiſten, but make the Ground fertile alſo, and the Trees proſper well.

Fern or any other vegetables, nay Stones covering ſuch Land, will preſerve it cool and moiſt.

Gravelly-ground to order.

§. 15. Gravel-grounds are as bad as any; becauſe a Tree in them cannot Root to any great bigneſs; and if Muck, or other Soils be laid to the Roots of Trees in ſuch Land, the Gravel will in a few years eat it up, and convert it unto it's own nature; but if a little Stony, a mixture of Mold among the Stones, and at the digging to pick out the largeſt Stones, then Trees will Root indifferent well in ſuch Grounds.

Over-flown Land.

§. 16. If Land be ſubject to be over-flown by the inundation of Rivers, or other falls of Water, ſo as the Water ſtand not too long upon it, nor the Land be of a ſtiff cold nature, it's very good for Fruit-trees.

Of uneven Ground.

§. 17. If there be any unevenneſs in the Land, ſome direct to level it, by carrying the Banks into the low places; but this will not only be very chargeable, but hurtful, by making the high places too barren, and the low Ground too rich.

But that your Trees may grow ſomewhat level in their tops, and not one overſhade another, and alſo appear comly, you may fore-caſt to ſet ſuch Trees as grow pendant, or are not apt to grow tall Trees, on the higheſt Ground, and ſuch as are aſpiring in the lower places.

The Fence and Order of Trees in an Orchard,

§. 18. Encloſe your Orchard with a good double Ditch about four Foot high, and plant thereon two Rows of good Hawthorn, or Whitethorn, which will be an excellent Fence by the time that the Fruit-trees bear, to keep out Cattel from cropping the tender Twigs of the Fruit-trees, and rubing againſt their Stems, and unruly People from deſtroying the Fruit. Good Whitethorn being the beſt Quick-fence for your Orchard, when it's grown up may be plaiſhed, the better to prevent Hogs or Sheep for creeping into it. Set no ſmooth Quick in it, that may grow to great Trees, becauſe they will be hurtful both to the Hedg and Fruit-trees, both by their tops and Roots when they are grown up: Having ſet two Rows of good Hawthorn, and made the dead Hedg on the out-ſide the Ditch, the Quick-ſet will grow the faſter, for the dead Hedg upon the Ditch is apt to choak the Quick-ſets, and thus with ſomtimes Weeding it you may ſoon raiſe a good Fence.

If you have an old Hedg already about your Orchard, ſcour the Ditch and plaiſh the Hedg, and cut down all big Trees that grow in it, unleſs on the North, and Weſt-ſide, the one requiring a defence to keep the Orchard warm, the other to ſecure it ſomwhat from the ſtrong Winds, that blow down the Fruit before it's ripe, tho it's far better they grow on the outſide the Hedg.

On the outſide of your Orchard, not too near the Hedg, if it be not well defended by Hills, Buildings, or the like; Plant on the North-ſide, two or three Rows of Walnut-trees, thicker than is uſually done on other accounts, to preſerve the Orchard from the cold Nothern Air.

Some are alſo for Planting a Defence on the Weſt-ſide, to protect them from the brisk Autumnal Winds, which blow down the Fruit before ripe.

Within the Orchard on the North-ſide, ſet the firſt Rows of Pear-trees, or ſuch other Trees as you know are apt to grow talleſt, and the reſt South-ward, as they decreaſe in hight, as near as you can judge; for ſo ſhall all your Trees ſhare in great meaſure of the South-ſun, and will be leſs lyable to receive damage by the Northern old: The beſt way you can ſet Trees in an Orchard is according to the Figure call'd a Quincunx, by Planting them at an equal diſtance every way, only with this obſervation, that every Tree of the ſecond Row may ſtand againſt the middle of the ſpace of the Firſt; in the Third againſt the ſpace of the Second; and ſo through out, which makes an

Orchard appear pleaſant to the Eye in what part ſoever thereof you ſtand.

Baring the Roots of Trees in Winter.

§. 19. If your Soil be not rich enough, once in three or four years in the Winter-time, open the Earth for a good ſpace round about the body of each Tree, and about a Month after with ſome proper Manure mixt with what came forth, fill up the hole again; but if you dig or Plow your Land, you will have no need to do this ſo long; and if your Trees were ſet by tumping, you need not do this, till the Roots are grown paſt the Ditch that was made about the Tump.

Muck-water good for the Roots of Fruit-trees.

§. 20. The Water that ſoaks from a Dunghil, is an excellent thing to enrich the Earth about the Roots of Trees, and if your Orchard chance to lie ſo as that it may be floted ſomtimes, you may do it after this manner.

Make a little Trench along the upper part of the Orchard, and from it cut a ſmall Gutter down every row of Trees, take off the upper Turf for half a yards breadth round about every Tree, at about a Foots breadth diſtance from the body, when a rainy day comes, let this ſoke down one Row, ſo that (as near as you can) every Tree may enjoy it three or four days at ſeveral times in one Winter

If your Orchard ſtand ſo that you cannot convey this Water to the Trees after this manner, you may carry two or three pale-full to every Tree twice or thrice a year, and pour it in where the Roots were opened, and againſt Spring put in the Earth again; when you do this firſt, ſtir up with ſomthing the bottom of this Water the more to thicken and enrich it.

This will follow the Roots and more enrich the Trees than can be done by Manure, or Dung, ſo that you ſuffer the Water not to be above a days time at once upon any one Tree.

Plant Fruit proper for the Soil and Clymate.

§. 21. Some judgment is required from the Planter in ſetting each Tree or Plant in the proper Clymate and Soil it moſt delights in, or in adapting Plants to the Nature of each Soil you have to Plant; for Trees will ſtrangly proſper, grow and bear in Soil and Ground they like, comparatively to what they will do if they are Planted in Ground wherein they delight not.

The Apple it ſelf, which is but one kind of Fruit, yet are there ſeveral ſorts of them, that delight in ſome places, and will not thrive in another, which made the Kentiſhmen ſo addict themſelves to the Planting of the Pippin and Codling; becauſe no other Apple would proſper ſo well in that County, whence they are call'd Kentiſh-pippin and Codlin; when in ſome other places neither of thoſe Fruits will proſper without Art, but are deſtroyed by that pernicious diſeaſe the Canker.

The Red-ſtreak alſo is obſerved to proſper better and yield a better juice in ſome places than in others, altho but in the next Pariſh, ſo Summer-pears will thrive where the Winter will not.

Therefore conſider what Species of Fruits are moſt natural to the Country or place where you intend to raiſe your Trees, which may be known partly by the growth and well bearing of Trees in the Neighborhood, or by experimenting variety of ſorts in your own Ground, then propagate and Plant thoſe that grow, proſper, and bear beſt.

Plant not Standards too near your Houſes or Walls.

§. 22. When you Plant an Orchard, or any Ranges of Trees near your Houſe or Walls, Plant them at ſuch a diſtance from your Houſes or Walls, as that when they are grown up to any conſiderable magnitudes, they may not over-hang your Wall-trees, or hinder the Sun too much from coming to them, whereby your Fruit is much better in everp reſpect.

CHAP. VIII.

The time moſt proper for Tranſplanting of Fruit-Trees.

Time for removing

§. 1. STone-fruit will be firſt ready to remove; for after two years growth in the Seed-plot or Nurſery after they are Inoculated or Grafted, you may well remove them, be they for Wall or Dwarfs, which you ought to do in *October* or *November*, early removing being advantagious for all Fruit-trees, both for the ſecurity of their growing and their well-growing. The beſt time to tranſplant into Orchards is from the end of *September* to the end of *November*, tho you may do it untill the end of *February*, but that's not ſo good by far, for the ſooner after Michaelmas the better; if the leaves are not all fallen when you remove the Trees, pick them off.

You may begin ſooner to Plant well-grown Trees, than thoſe that are very young, and in a very thriving condition, eſpecially young Apple-trees, and Peaches, whoſe Stocks were raiſed of the Stone or Kernel, which will be in a growing poſture untill extream weather put them to a ſtand; therefore for ſuch ſtay untill about the middle of *November*.

Young Trees having been taken up about *November*, and the end of the Roots cut off, like unto a Hind or Goats foot on the under-ſide, and laid in the Earth till *March* to be Planted, being then taken forth again, it hath appeared that they have put out many Fibrous Roots at the ends of thoſe big Roots cut off, which had they done in the place they were to grow in the next Summer, this would have been a good preparation againſt Spring; and it's always ſeen that Trees ſet in *February*, or *March* make generally a much leſs growth the next year, than thoſe that were ſet before Winter. If a dry Summer happen to ſucceed, it often kills ſome of the late-ſet Trees, and puts ſuch a Sap to others that they recover not of many years.

In ſharp Froſts, or in Snows, though you could dig, it's not good to remove Trees.

How to Prune and order Trees at removal.

§. 2. If your Trees for Standards at ſetting are not very weak bodied, Prune them up, leaving three or four of the principal Branches on the top, that grow outward, which ſhould be lop't off almoſt a years growth but if they be weak (leſt the Winds ſhould injure them by toſſing them) you may top them lower, doing it at a Bud or ſmall Twigg, and in big Trees cut the top almoſt all off; and whenſoever you tranſplant young Trees cut off the end of all big Roots on the under-ſide, like unto a Hinds Foot, and they'l put forth new Roots the better.

Bigneſs of Trees to be removed.

§. 3. At three years end after Grafting in the Nurſery, Trees may be fit to be removed into an Orchard, eſpecially if you Plow (or which is ſafer, dig) the Orchard-Land, and ſet Beans or other Kitchin-Garden ſtuff in it for ſome years; but if it be ſuch a piece of Land that you Graze, then you muſt be ſure their heads are grown out of the reach of Cattle before you ſet them there, and you muſt Fence them one of the ways mentioned hereafter.

How to remove a large Tree.

§. 4. It's the beſt way to remove Trees very young, as at three years growth, if they may be ſecured from danger, which in Orchards or Fields where Cattle have liberty to feed, they cannot well be with ordinary Fencing, unleſs they be of five or ſix years growth after Grafting. He that hath a Nurſery of his own, and removes them into places, ſo near that he can well do it, let him the very ſame or the next day after they are taken up, ſet them in the place appointed for them, and not cut off too much of the Roots, but the greateſt part of the Top; and he may do well to Plant ſtrong and well grown Trees eſpecially, in his Fields, and out-grounds; for the charge of Fencing will be much eaſed, and being carefully ſet, they may proſper as well or better than ſmall ones, eſpecially in uncultivated or ſtiff Land by nature, where young Trees cannot ſo well put forth Roots; and the following way is better to have old Trees grows and proſper well than is commonly practiſed, *viz.*

If you chance to have any Trees betwixt Ten and Thirty years old that you have a mind to remove, you muſt about *November*, the year before you Tranſplant them,dig a Trench as narrow as you pleaſe, but ſo deep as to meet with moſt of the ſpreading Roots at ſuch a diſtance round about the body of the Tree as you would cut the Roots off at when you remove it, (about half a yard diſtant from the body may do well, if they be not very large Trees, but if you have not far to carry them, longer) as you make the Trench cut the Roots you meet with clear off, and ſmooth without ſplitting them, or bruiſing the Bark; fill up the Trench again, and by *October* next after, when you take up the Tree to ſet it elſewhere, you will find thoſe great Roots will have put forth many fibrous Roots, and made preparation for more, with freſh and tender Roots, upon removal will enable the Tree to draw more nouriſhment than otherwiſe it would, and conſequently to proſper better in it's new manſion.

§. 5. Many of thoſe Trees removed very timely, as in the end of *September*, or in *October*, may ſhrink and ſeem to wither much, yet they will recover and come to their former plumpneſs.

CHAP. IX.

Of the manner of removing and ſetting Trees.

Coaſting Trees.

§. 1. IN removing any big Tree, men generally obſerve to Coaſt them, that is, to place the ſame ſide of the Tree to the South-Eaſt, *&c.* as grew formerly that way where it ſtood before; to which end before you remove it, you had beſt make ſome mark in the Bark of the Tree which way it ſtood, this you may obſerve in ſtraight Trees, but it's more material if your Trees lean one way more than another, to ſet the leaning ſide towards the South-weſt, from whence the ſtrongeſt Winds blow; but notwithſtanding this obſervation, you need not mind it in ſmall Trees, or ſuch that have grown in cloſe-Nurſeries; they not being capable of any conſiderable alteration from any Aſpect of the Heavens.

In caſe a Tree before removal hath the benefit of the Eaſt, or Weſt Sun, more than of the South, then Plant that Tree that before had that advantage, on the like again in it's new place, which altho it vary from the directions aforeſaid, yet not from the reaſon of it.

How to take up Trees to be Tranſplanted.

§. 2. Be carefull in taking up the Plants; dig round about them, and take off the Mold from their Roots; if it be a ſmall Plant, it may be drawn up eaſily, the Mold being taken away, if it be great, and the Roots ſpread much, then they may be cut about half a yard from the body of the Plant, and the greater it is, the further off cut the Roots, and ſo draw it up; but keep the Spade from coming too near the Tree, by ſurrounding the Tree at a good diſtance, and endeavour to raiſe as much Earth as you can with the Tree, but if it be to carry far, ſhake it off; then pick off all the Leaves, if they be not fallen off, becauſe the Sun and Air by their means extract the Sap out of the Branches.

Pear-trees have ordinarily more brittle Roots than Apple-trees, and the Roots of Apple-trees, or Stocks, raiſed of the Kernels of good Fruit, are more brittel than thoſe raiſed of Crab or wilding Kernels; therefore take more care and pains in opening Ground deeper and wider, when you take up the more tender and brittle Rooted Plants, and pull not over hard, leſt yon leave moſt of the Roots behind.

Young Trees beſt to ſet.

§. 3. Young Trees of three or four years old at moſt when removed, do not only grow ſurer, but make a larger growth at firſt Planting, than greater and elder Trees can do, and are therefore beſt to tranſplant.

§. 4. If your Trees have lain ſome time out of the Ground, or been carried in the Wind or Froſts, that their Roots ſeem to be dry, ſet them over night in Water, immerging only the Roots, and it will very much revive them; or when you Plant them, after you have added an indifferent quantity of Earth, caſt in a Pail or more of Water as the largneſs of the Foſs or hole requires, which not only quickens the Roots, but makes the Earth adhere thereunto, which otherwiſe would lye light and hollow about them. The Air does much incommode the Root of any Plant whatever, and ſo does Froſt.

How to order Trees for Carrying.

§. 5. One may Carry young Trees many Miles to be tranſplanted; being carefully taken up, lay the Roots all one way, the ſmalleſt and tendereſt in the middle of the Bundle, and bind them cloſe from the Roots to their tops with a ſoft band, and then ſtuff the Roots round about with Straw, Hay, Moſs and the like; afterwards bind the bundle all over from the Roots to the very top with Hay, or Straw-bands, or ſomething els, to preſerve them from bruiſing , and wrap ſomthing abouts the Roots, a piece of an old ackcloth, or any thing that will preſerve the Roots from the Wind, Sun, and from bruiſing: And in Winter you may carry young Trees thus many Hundred Miles.

§. 6. *See Chap.* 8. *Sect*, 2.

Set upon every Removal in a better Soil.

§. 7. It muſt always be obſerved that upon every removal of Fruit-trees, to Plant or ſet them again into as good or better Soil as that out of which they were taken.

But if that cannot be, then Plant, and ſet them for ſo far as the Roots may extend in three or four years growth in as good or better Mold than that out of which they were removed , by laying good Soils under, upon, and about the Roots at the ſetting; for after they have taken Root two or three years, they will then grow in ordinary Soils; the great danger is at firſt Planting, which is the reaſon Trees proſper abundantly better taken out of courſe and barren Nurſeries, than out of thoſe whoſe Soils are very rich, either by nature, or improvement: therefore be ſure to lay as good or better Soil upon, under, and about the Roots when they are ſet again, if you expect your Trees proſper.

§. 8. Take

Set not Trees deep but ſhallow.

§. 8. Take heed of ſetting the Roots of your Plants too deep below the good Soil, for if ſet ſhallow they proſper far better, than ſuch as are ſet deep; becauſe in the top of the Earth is the beſt Mold, ſo made by the Suns influence thereon, and every ſhower of Rain reaches, and refreſhes, and feeds the Roots: for all may eaſily obſerve Trees thrive beſt where the Roots run near the Surface, and not at all where Planted deep; becauſe by deep Planting they thruſt down their Roots below the good Soil into that which is barren and unfruitful; which cauſes your Trees to be injured by Canker, Moſs, and to be bad bearers, and ill thrivers.

Prune the Branches and Roots at removal.

§ 9. Cut away many of the Branches of all large Trees you ſet, becauſe every removal is a check to nature, and their growth, and the Roots being cut, yield for ſome years but a faint nutriment, ſcarce ſufficient to preſerve life, much leſs to make a large growth: But Plants of a leſſer ſize need not have their Branches cut, unleſs they croſs one another, grow too nigh together, or run up too high without ſpreading, but cut off the ends of all the Roots; becauſe if cut, many ſmall Fibra's or ſtrings ſhoot out of the cut place, which draw nouriſhment for the Plant, which without cutting would not.

See before Sect. *the ſecond*, *in* Chap. 8.

§. 10. Make a hole about one yard ſquare and two Foot deep; but if your Soil be wet, or binding Gravel, or ſuch like, very bad in the bottom, go not ſo deep, it will be better to ſet them ſhallow, and raiſe the Earth about them; And if not manur'd Land you ſet them in, have in readineſs ſome very fine rich Mold, or ſhovelings of a Yard where Cattle are frequently lodged or fed, or well temper'd Street-dirt, or the Mold of rotten Vegetables, or the Sediments of Currents that ſettle in the bottoms of Pools, or Ditches, that have lain long on heaps, till the ſame are become mellow and dry; eſpecially if ſome Lime be at caſting out mixt therewith, or rotten Neats-dung, which you may mix with the Earth that came forth of the hole; and ſo order it, that it may be as good or better than that out of which the Trees came; Fill the hole full half way up with this, and tread it down in ſuch form (having reſpect to the Roots of the Tree that is to be ſet in it) that the Roots may reſt cloſe upon it, then cut off the ends of all the Roots like unto a Deers foot on the underſide, they'l put forth new Roots the better, (if the Tree have one long down-right Root (call'd the Tap, or Heart-root) cut it almoſt half off) then clay

How to ſet Trees.

H your

your Tree in, and fill up the hole with the Mold, by caſting in the ſmalleſt and beſt next to the Roots, and be careful that all the ſmall Mold run between all the Roots; to that end, ſtir and ſhake the Plant, that there may not be any hollow place where the Mold ſalls not, and with your hand, draw up the uppermoſt Roots, and part them that they may ſpread in the Mold every way; Fill up the hole with the Mold, and uſe all diligence to Place the Roots of your Tree in the ſame poſture they were in before you removed it. If the Tree be young, and the Roots ſlender, this can be performed no way but by throwing in a little Soil at a time, and then raiſing up with your hands ſuch Roots as are preſſed down by it below their proper ſituation, ſpreading them on the Soil you have caſt in, and then throwing in more, and ordering the Roots as before, ſo continuing to do till you have fill'd up the hole.

Old Trees with ſturdy Roots require not ſo much curioſity, but be ſure that the Mold lye cloſe under, betwixt, and among the Roots.

If the Soil be light, preſs it down gently with your foot; then cover them half a yard about with Straw, Weeds, Litter, Fern, or the like, which will keep the Roots warm all Winter, and moiſt and cool in the following Summer; but if your Ground be not very rich, cover the top about the Tree with Dung.

Note that Dung is not good to lay next the Roots of your Trees, unleſs it be converted to Mold by it's long lying and rottenneſs, but Dung is better, being mixed with the Earth laid next the Roots of Trees than alone.

§. 11. Forget not to water all Trees you Plant, either very early or late.

To Stake Trees.

§. 12. Standard-trees Planted in an open place ſhould for a year or two be ſtaked, if they be large Trees in danger to be ſhaken by the Winds; for a Tree at firſt ſetting ſhould not be ſhaken, but after two or three years Rooting, ſhaking is good: If they ſtand in a ſad Earth, not Plowed or digged, knock down a ſtraight Stake cloſe to every Tree, and tye the Plant faſt to it with a Hay-band or other ſoft Band, and be careful to prevent galling or fretting by interpoſing and wrapping the Hay-band once or twice about the Tree before you tye it to the Stake; ſet the Stake leaning towards the Coaſts you expect the greateſt Winds, and let not your Stakes continue above a year and half.

Watering Trees.

§. 13. Trees being Planted, it's very good to keep yearly the Ground Digged or Plowed about them for the firſt ſeven years, which will conduce much to their growth, and preſerve them from Moſs, and other diſeaſes.

If you are enforced to remove a Tree in Summer, take the Earth you digged out of the Foſs or hole you intend to Plant your Tree in, and mix and temper it well with an equal quantity of Cow-dung, and as much water as will make it into a Liquid pap; fill the hole almoſt with this, and let the Root of the Tree gently ſink into it; cover it over with the Mold, and lay ſome Fern or Litter over all, and once a Month water it, and it will grow well.

To help Trees on barren Soil.

§. 14. If your Land be not rich on which your Trees grow, it's exceeding good in *October*, *November*, or *December* to lay on the top of the Earth about them, Lees of Wine, the waſhing of ſtrong-bear Barrels, Blood of Cattle, dead Dogs, or any Carrion, Swines-dung mixed with Earth, once in three or four years, but have a care that you lay not too much, and too often about them, alſo Soap-ſuds, when cold, and Soap-aſhes are alſo good. And if your Trees be grown out of the reach of Cattle, you may ſuffer them to ly amongſt them in the Winter from Michaelmas till *May-day*.

§. 15. Trees

About bad bearing Trees.

§. 15. Trees of good bearing kinds will uſually bear after they are four or five years old, untill extream old age, unleſs they grow on barren Soil, or ſomtimes they'l not bear whil'ſt they grow very ſtrong, luſtily and vigorouſly, and have too great a ſupply of Sap; but after ſome years they'l then bear well, if they were Grafted of good bearing kinds; but in caſe Trees are Wall-trees and ſhoot exceſſively, and bear not, then abate their overful and rank fertile nouriſhment, by putting in Sand, or any thing that is barren inſtead of the fat Soil, and cut off one or two of the biggeſt Roots from the body, that ſo it may have leſs nouriſhment, and that left will turn to Fruits; and bend downwards alſo the Branches, and faſten them to the Wall with their tops as low as may be, which reſtrains and obſtructs the exceſſive riſing of Sap, which riſing moderately turns to Fruits. But if Trees are naturally bad bearers, there is no other remedy, but Grafting them again with Grafts taken from ſome good bearing kinds, which are known by yearly experience to bear Fruits well and abundantly.

To Graft old Trees.

§. 16. When Fruit-trees are grown to extream old Age, and therefore bear little, cut off their heads or big Boughs, not ſtraight over, but aſlope, that Rain and moiſture may not reſt on the top to Rot it. Theſe will put forth many young Shoots next Summer, which may be Grafted the Spring after with good bearing kinds; and theſe old Bodies having young heads which draw up Sap vigorouſly, will bear ſtore of Fruits many years after; or you may cut off their heads even and ſmooth, and put two Grafts in the Cleft, and two in the Rind, and they will ſoon cover their heads, if you keep well temper'd Clay continually on and about their heads. See *Chap.* 2. *Sect.* 10.

To know the kinds of your Trees.

§. 17. When you Plant Fruit-trees in your Garden, or Walls, or in Orchards, draw the Platform of them in paper, and ſo ſet down the name of every Tree according to the place it ſtands in, which will be both ſatisfactory and uſeful at any ſeaſon of the year, readily to know what kind of Fruit every Tree beareth.

CHAP. X.

Of Planting Wall-fruit.

AS for the Soil, diſtance, and Stocks for Wall-Trees you are before inſtructed; It remains only to ſay ſomething that before has not been touched on concerning them.

Setting Wall-trees.

§. 1. Make a Trench by the Wall-ſide you are to ſet them up to, about two Foot broad, and as deep, and in every place where a Tree is to be ſet, about a yard ſquare, mingle good old rotten Neats-dung with the Earth, and fill it up near as high as you intend the Borders to be, and when you have filled it up about half full, tread it down; but if you deſign no Borders, make then only a hole about a yard ſquare; but if your Soil be wet, or binding Gravel, or ſuch like, very bad in the bottom, go not ſo deep, it will be better to ſet them ſhallow, and raiſe the Earth about them. Try by ſetting the Tree in the hole which ſide will ſtand beſt to the Wall, and then cut off ſuch Branches as grow directly toward, and fromward the Wall, leaving only the ſide-Branches to be nail'd unto it; then clap your Tree in, placing it as far from the Wall as the top will allow, that muſt be ſpread upon it, that the Roots may have the more liberty to ſpread towards the Wall, fill up the hole with the Mold, and obſerve the Directions given at *Chap.* 9. *Sect.* 10. and 11. about ſetting Trees in all other things.

Summer pruning of Wall-trees.

§. 2. Every year it will be neceſſary to Prune and nail them to the Wall, twice or thrice according as they grow more or leſs; Firſt in Summer about the end of *June* or middle of *July*. Cut off ſuch as grow directly out-ward cloſe to the body; if you cut a part of any Branch off, do it at a Bud, that the Cut may be cover'd with a freſh Sprig; ſome muſt be Cut off, and others ſpread to the Wall; Cut off thoſe that will not ſpread to the Wall, and pluck not off the Leaves of the others.

Cutting off the ſmall Branches in Summer, is ſome check to the Sap, and hinders its exceſſive riſing at that time, which elſe would ſpend it ſelf in larg and ſuperfluous Branches, and ſo rob the Fruit.

Lay none a croſs or under one another, but let them ſpread as the fingers of your hand when expanded.

The Winter Pruning.

§. 3. The Winter Pruning may be done as ſoon as the Leaves and Fruit are fallen, or any time before *February*, except Nectarin's and Peaches, which are apt to dye if Prun'd before the Sap riſe; the beſt time to Prune them is after they Flower.

The Winter Pruning is chiefly for the well ordering of the Branches, that could not be well placed in Summer time, and for the Cutting off great Branches when need is. Preſerve Branches as low, and as near the Ground as may be, and cauſe them to bend and grow ſtraight along the ſides of the Wall both ways, and ſuffer not the biggeſt Branches to riſe ſtraight upward, but nail them down-wards, to furniſh the bottom of the Wall. Be ſure to take off thoſe that grow the ſtraighteſt out, and will not be bowed cloſe to the Wall. And Obſerve to bend down the ſtrongeſt Shoots (that would grow upwards) towards the ſides, otherwiſe they will be apt to run ſtraight upward and not cover the ſpace you deſign for them, and by their Luxurious growth will extreamly rob the ſide-Branches of their nouriſhment; there will Branches enough ſpring out freſh to run upwards out of them, when they are ſo bowed.

Thoſe that ſuffer all the young and larg Shoots, to grow as much as they will all Summer, without Cutting, and then in Winter Cut all or moſt of them quite off from the Trees, and preſerve only the old ſtumps, or biggeſt Branches of the Tree, do commit a great errour; becauſe thereby in the middle part of the Tree, and near the Root, few or no young Branches will be ſeen, whereas they ſhould preſerve all the young Branches to ſpread up againſt the Wall untill it be full of ſmall Boughs, and then ſome young Shoots every year may be Cut off.

Shreads of Woollen Cloath are the beſt things to nail them up with; ſome uſe gentle Leather, or the Cuttings of any old Hat, any of theſe may ſerve the turn.

To renew Old Trees.

§. 4. When your Wall-Trees are grown old and full of big Wood, you may in three or four years time renew them, by Cutting out ſome of the biggeſt Stems or Boughs yearly, cutting each Branch off at ſome ſmall twig (if it may be) that either it, or a freſh Branch may grow over the cut place, which muſt be kept cover'd with Clay, and ſo go on yearly till all the big Wood is cut out. Or if you diſlike the kind of Fruit, you may Inoculate or Graft the Boughs with a better ſort of Fruit, but not all in one year, but ſome in one year, and ſome in another.

By either of theſe ways you may renew a decaying Tree, and keep your Wall almoſt ſtill furniſhed, with leſs trouble and charge, or loſs of Time, than by taking up the old one, and Planting a young one in its ſtead.

§. 5.

§. 5. In furniſhing your Walls with Fruit-Trees, Obſerve always to Plant Peaches and Nectarines up to the Wall that is moſt Southward; the Eaſt-Wall is to be allotted to Apricocks, early Cherries, and the choiceſt Plums; the Weſt may be ſet with Pears, Cherries, and Plums. Some of the courſeſt Pears and Plums, you may ſet to the North-Wall, both to cover the Wall handſomely, and many years they will bear as well on it, as on Standards; eſpecially if your Wall ſtand not directly North, but ſo as to have ſome conſiderable benefit of the Sun, Nut-Trees likewiſe are proper for this Wall, and will proſper well up to it.

Setting Fruit proper for each Wall.

If your conveniencies will allow it, and you are to build a new Wall, it is much better to have your Garden Walls not ſtand directly towards the four points, than otherwiſe, and then the worſt Wall will be much better, and the beſt good enough for your purpoſe.

As thus, the Eaſt-Wall to incline to the South; the South-Wall to the Weſt, the Weſt-Wall to the North; the North to the Eaſt; or contrary, but not ſo well: In the firſt way the two firſt Walls will be extraordinary good, and the two later good enough for Ordinary Fruit.

§. 6. In building a new Wall it would be very advantagious to make it with half-Rounds, each ſemicircle being eight yards round in the inſide, and about ſix yards in the

How to build a new Wall for Fruit-trees.

the face, or diameter, each taking two Trees; and betwixt every half-Round let there be two Foot breadth of plain and direct Walling, where you may place a Flower-pot on a Pillar two Foot high, or Plant a Vine to run up it, which every Summer, you may let ſpread it ſelf a little into the half-Rounds on each ſide it.

One in a cold Countrey having his Garden-Walls thus made, had his Trees bear Fruit plentifully in ſuch years as his Neighbours generally fail.

In ſome places Walls are thus made for raiſing Melons under, by a pattern and directions from *Italy*.

Grapes ripen delicately on every ſide the Cluſter that grow in a half-Round. By means of theſe Rounds, every Wall will one time of the day or other, have a ſhare of the Sun, and the beſt Walls (by reaſon of ſuch a Reflection, and Collection of the Sun-beams as will be in every Round) will be exceeding hot, and the Trees be more ſecure from Winds.

A Pale is as good for this purpoſe, and in reſpect of Ripening Fruit better than any thing elſe; it can be raiſed up too, if the Pale be made of ſawed Boards, nine or ten Foot high, and exactly joined, that no wind may come through; next to this in goodneſs is a Brick-Wall, and then a Stone-Wall; and the worſt of all that which is made of Tymber and Morter; but in this every one cannot be his own chooſer, but muſt comply with what the Countrey he lives in will permit him to do for his beſt Convenience.

Baring the Roots of Wall-trees.

§. 7. Sometime in the Winter after two or three years growth, if the Soil the Roots are to ſpread into be not rich enough, open the Ground at the outſide of the holes you made at ſetting, as near round about as the Wall will permit; if you find no Roots bare, let it lye open a Month, and then fill it up with the Earth that came forth well mixt with ſuch a Manure as ſuits with it.

CHAP. XI.

Of Trees of low Stature and Growth, commonly call'd Dwarf-Trees.

§. 1. DWarf-Trees have been of late more than ordinarily valued and coveted; becauſe they are of great advantage for Table-Fruit (whether Pears, Apples, Plums, or Cherries) and being but of low Stature may be conveniently Planted for Walks, and in the border of Garden-Walks, without prejudicing any thing elſe about them, and their Fruit will be as well ſecured, and commodious for gathering as the Wall-fruit.

Stocks for Dwarf Pear-trees.

§. 2. Plants for this purpoſe muſt be provided, and prepared ſomewhat differently from thoſe for Orchards, or Fields.

The Quince-tree is generally uſed, and beſt for Stocks for Pears both for Dwarfs and Wall, as well becauſe it may poſſibly ſomewhat meliorate the Pear as (and that chiefly) becauſe it groweth not to that bigneſs as on a Pear-ſtock it would be apt to do.

§. 3.

§. 3. For Dwarf Apple-Trees the beſt Stocks are ſuch as are raiſed of the Cuttings of other Apple-Trees that will grow by Cuttings, as of the Gennet-Moil, Kentiſh-Codling and others.

Stocks for Dwarf Apple-trees.

That theſe are more proper for Dwarf-trees than Crabſtocks appears. 1. Becauſe the Fruit will be rather better'd and not tainted with any aſperity or Roughneſs, as poſſibly it might be, if Crabſtocks were made uſe of; and one chief deſign in theſe Trees is to have choice and delicious Fruit for eating. 2. Apple-Trees that are raiſed on ſuch Stocks will not grow ſo big as thoſe on Crabſtocks, but are with eaſe and certainty kept Dwarfs. Mr. *Rea* judging the Paradiſe-Apple of ſomewhat ſlow growth in bringing forward a Cyen, adviſes to Graff a Paradiſe on a Crabſtock, and the Fruit you would have, on that Paradiſe, that the Crab might yield plenty of Juice or Sap to the Paradiſe, and the Paradiſe retard the growth of the Apple Planted on it, ſo as to keep it a Dwarf; but beſides loſs of time the ſucceſs of this is doubted, becauſe the Crab will put forth ſtrong Roots, and yield plenty of nouriſhment; for why Apple-Trees raiſed of Cuttings grow not to be very large Trees, is their putting forth ſuch ſmall Roots, by which means the Tree hath Sap conveyed to it accordingly. 3. By uſing theſe Cuttings for Stocks you ſhall get at leaſt four years time, reckoning from

Sowing the Crab-Kernel, and the ſetting the Stem or Cutting be duly conſider'd, as by ſetting the Stem in the place you intend the Dwarf-Tree ſhall grow, and ſetting it in good Earth, for then after one years growth, you may Graft it, and you will eaſily diſcern the advantage in point of time.

If it be ſaid Crab-ſtocks ready grown may be made uſe of inſtead of Cuttings, There's readily anſwer'd, they muſt grow two, if not three years after they are ſet before they are fit to Graft, and in reſpect of their large growth will not be fit for Dwarfs.

Some Nurſery-men have made advantage to themſelves by this ſpeedy way of raiſing Trees by Cuttings, but to the diſadvantage of them they put them off to, for Planting in Orchards; becauſe they are never like to make large or long-laſting-Trees.

§. 4. The way then to provide Stocks for Apple-Dwarfs is thus;

How to provide Stocks for Apple-Dwarfs.

In *October* from ſuch Trees whoſe Cuttings will grow, take ſuch Stems, or Branches that grow ſtraighteſt, and which (in the place where they ſhall be Grafted) are an Inch or more thick, if they be near two Inches ſo much the better; Cut them off if you can, an hands breadth below ſuch Knots or Burs as are on them (for at thoſe Burs they principally put forth their Roots) and cut off the top that they be not above a yard long, (if you cannot get them ſo long) of Quinces, you muſt be content with ſhorter, if they be two foot it may do reaſonable well ; Cut off alſo all the ſide-Branches cloſe to the body, except one ſmall Twig near to the top, for the Sap to vent it ſelf at ; ſet theſe preſently in Beds as your Seed-plants were, or rather if your Garden be laid out, (that you can know the places they ſhall ſtand in) ſet them there.

You need not fear ſetting theſe as deep as the length will bear, ſo that there be of them about a Foot above Ground, becauſe they will ſhoot out Roots all along, almoſt to the top of the Ground, and ſo ſpread their Roots in the good Soil, and by ſetting them ſomething deep, they are in leſs danger of Dying, and this prevents the trouble of covering the Ground about them with Fern or Straw ; and by this means likewiſe they will ſtand the firmer in the looſe Garden-land for Grafting at a years end, and better ſupport a ſpreading top afterwards.

Stocks by Circumpoſition.

§. 5. But becauſe its hard to meet with great plenty of ſuch Branches, thus to be cut and ſet for Stocks, that have Burs or knots on them ; Planters have therefore found out a way (which is called Circumpoſition) to bring theſe knots or Burs upon Branches, that had them not before, and to mend and improve thoſe that before had them, and the way of it is as followeth.

About the beginning of *February* next before you deſign to cut theſe Stems, directly above the place you intend to cut them off at, for above a Foot in length, faſten about them ſome Earth in an Old Hat, or Boot, or Bag made of ſome ſtrong Cloth: and in that Earth they will have put forth Roots againſt the *Octob.* following, when you are to cut them off to ſet them.

Or (which is a quicker and readier way) you may dawb ſome wet Earth or Clay about the place, and wrap a Hay-band about it, putting ſome moiſt Earth likewiſe betwixt the rounds of the Band, and then running it about again over the ſpaces betwixt thoſe firſt rounds of the Hay-band, and making faſt the ends of it.

If the Stem have no Bur, before you go either of theſe ways to work, then take off here and there a little ſlice of Bark, about an Inch long round about it, near the middle of the place to be cover'd, as hath been directed.

Some direct that before this application of the Earth, about an Inch breadth of the Bark be taken off round about the part of the Branch, that is to be ſurrounded with the Earth, that Roots may ſhoot out in greater quantity, by coming out in the upper skirts of that Circle, as well as in the lower; but this is but a Crotchet, and grounded (as my Lord *Bacon* and others have obſerved) upon the opinion of deſcenſion of the Sap; whereas indeed there is no ſuch thing; for the whole maſs of Sap is always aſcending, but in leſſer quantity in the Winter; becauſe the Tree is then only to be nouriſhed, and kept alive, to which end a ſmall ſupply is ſufficient, and yet neceſſary; and in greater plenty in the Summer to furniſh the Tree with Leaves, Fruit, and new yearly growth; and the true reaſon why Leaves and Fruit fall off towards Winter, is not becauſe the Sap returns downward from them, but becauſe the Sap aſcends not ſo vigorouſly at Winter as in the Summer, by reaſon of the coldneſs of the Seaſon, and the Suns ſmall ſtay on our Horizon, and becauſe they have arrived to their full ripeneſs, and the Trees fail by degrees to convey up ſo much Sap as it did in the Summer to them, to produce freſh ones; and therefore conſequently that's an idle miſtake too, to think that the Sap or Juice in the Winter, is laid up in the Roots, as a Repoſitory, as appears plainly, inaſmuch as they are ever found dryer in the Winter than in the Summer, ſo that upon the whole, this taking the Bark off round the Branch is good for nothing, but to endanger it by intercepting the Juice or Sap, which riſes in greateſt quantity betwixt the Bark and the Wood;

but if as before was hinted, you take ſome little ſlices of the Bark off round the Branch, here and there, leaving the Bark entire in ſome places, this may by checking the Sap, cauſe it the more abundantly paſs and be converted into Roots.

But to proceed to the buſineſs in hand, you have ſeen the way of preparing Cuttings by Circumpoſition; and though ſome will pretend to raiſe Trees of any kind by the uſe of it, yet it's certain it avails not, but only in ſuch as by a peculiar property are apt to put forth Roots, being cut off and ſet into the Ground, and thoſe generally known and made uſe of this way, are the Kentiſh Codling, the Gennet-Moil, ſome ſorts of ſweet Apples, and Bitter-ſweets, the Quince-tree, the Mulberry-tree, Goosberry-trees, Curran-trees, and the Paradiſe Apple-tree, which laſt is much commended by Mr. *Rea*, for to raiſe Stcocks for Dwarf Apple-trees.

To raiſe Stocks by cutting down an old Tree.

§. 6. Another way to raiſe Stocks for Dwarf-trees is, to cut down ſome one Tree of little worth, of ſuch a kind as you want Stocks of, about a Foot or more from the ground: This will make ſome kind of Trees very apt to caſt forth very good Suckers from the old Roots; ſuch as are of two years growth may be tranſplanted; and the ſtump above ground, will alſo put forth abundance of young Shoots: after theſe young Shoots have grown out of the Stump one year, caſt Mold or Earth about them a good height, ſo that you cover not the Tops of any of them, where let them grow two years more, and they will be well rooted, then cut them off from the old Stock (which after that may yield freſh ones again) and ſet the Shoots you take off as before hath been directed about Cuttings.

Theſe will be about three years longer before they be ready to Graft than Cuttings, but will be very good young freſh Stocks, and is a good way to raiſe Stocks of the Quince-tree for Pears, becauſe Quince-trees generally grow ſo crooked and irregular, that its difficult to procure any conſiderable quantity of them by Cuttings.

If they ſhoot up tall after they are molded, you had beſt top them at a convenient height; it will make them grow the more in bigneſs and ſo be ſooner fit to Graft. But if you have a deſire to have any of the ſame kind as the old Tree was, you need not top them.

And by this means if you want Quince-trees, Codlings, *&c.* you may be furniſhed with plenty, that will make better and handſomer Trees than if you raiſe them by Cuttings.

Stocks for Dwarf Pear-trees.

§. 7. You may raiſe Stocks for Dwarf Pear-trees from Suckers of Old Pear-trees (if you cannot conveniently get enough of the Quince-tree) for many Pear-trees caſt them naturally, which being preſerved from Cattle, may be taken up and ſet in Beds of Earth as you did the Seedlings.

If your Pear-trees yield not Suckers of themſelves, you need only cut off the top of ſome old ill Pear-tree (and Graff it with a better Fruit if you pleaſe) and the Roots will caſt forth Suckers plentifully, and you may help them by making a ſmall Ditch or Gutter ſo as to bear ſome of the Roots about two yards diſtant from the Tree, or pare off the Graſs (if any grow about the Tree) that they may have the more liberty to ſpring up.

Or in this caſe you may bare the Roots, and then give a Cut croſs ſome Roots almoſt to the Heart, and from the croſs Cut cleave the Root, raiſing up the looſe part, and put in a little Stone to keep it open; cover it three Inches over with Mold; let this be done if you can, where you find a Bud or Eye on the Root for the Sucker to Shoot out at, and either inoculate the young Shoot in the place where it ſtands, or remove it to ſome other place after a years growth, and when you do, cut off with it about a Foot of the old Root; and by this means you may have Suckers from ſome other Trees, that do not naturally yield them.

§. 8.

§. 8. To have Stocks for Dwarf Cherries, and Plums, or for ſuch Trees for a Wall, the ſpeedieſt way, and ſuch as will ſucceed for that purpoſe, is by Suckers of the common red Cherry, and any ordinary, or rather white Plum-tree, both which caſt up Suckers plentifully.

Stock for Dwarf-Cherry and Plum-trees.

If the Suckers grow in a place ſecure from harm, you may inoculate, or Graft them before removal, under their mother Plant, and let them grow there one year after: and thereby you'l gain a years time and more; and chooſe ſuch Suckers as grow at greateſt diſtance from the old Tree.

§. 9. In Grafting or inoculating Stocks for Dwarf-trees, obſerve to do it as low as you well can, with two Cyens placed on each Stock, and thoſe longer than in Grafting for large Standards that they may ſpread from the Ground.

How to order the heads of Dwarf-trees.

And after they are grown two or three years in the places they are to ſtand in, to make them ſpread, and to keep the Boughs outward, you may tye an old Hoop of a Barrel, or ſome ſuch thing in the midd'ſt of the Branches, to bear them a good diſtance one from another; but if one Branch be much ſtronger, or more inclined to grow upright than the reſt, then you may drive a Stake into the Ground, and tye the ſturdy one down to it.

If you Cut the Bark croſſwiſe in ſeveral places on the inſide of the Branches, when they are placed as you would have them, it will be a means to make them more willing to continue in that order of their own accord, after ſome years growth: If any one Branch ſhoot out much further than the other, cut off its top to keep it even with the reſt, and yearly cut much off, eſpecially new Shoots, that grow directly upwards, after they are grown to that height you deſign them to be of, which may be about a yard and an half.

Trees raiſed of Cuttings.

§. 10. Having directed how to raiſe Kentiſh-Codlings, Gennet-Moils, Quinces, or any that grow of Cuttings for Stocks; there needs no other Rules for raiſing Trees, or Hedges of the ſame kind of Fruit, only you need not cut them ſo ſhort as you do for Stocks.

Codlings Grafted on Crab-ſtocks, and ſet in a Garden or elſewhere will, encreaſe their growth; becauſe Crab-ſtocks have great Roots, and will yield them more plenty of nouriſhment than Roots of their own putting forth, when they are raiſed only of Cuttings. Others

Graft Gennet-Moils on Crab-ſtocks, and they thrive well, and bear a larger and (ſome think) a better Fruit than thoſe Trees of that kind raiſed by Cuttings: ſome have Grafted ſeveral of them in rough and Woody Grounds, which have grown with very ſtrong Shoots, and cover'd the Stocks very ſoon.

CHAP. XII.

How to Plant in the Fields, with the various advantages thereof.

§. 1. MUltitudes of Fruit-trees may be Planted abroad in the Fields and Hedges of incloſed Grounds, whereof very great profit may be made without any conſiderable damage either to Corn, Hay, or Paſture, and its beſt in this way to Plant the courſer, harder, and long-keeping kinds of Fruits, which will not be meanly ſerviceable to a Family by uſing them either for Baking or Cyder. Theſe Trees being about ſeven Foot high before they begin to ſpread, will be out of the reach of Cattle, and not troubleſome to Workmen about Hay and Corn in Summer-time, if Planted twenty or thirty Yards diſtant one from another, and in Ranks throughout the Field, that the Plow may continue a ſtraight Furrow all along from one end to the other, whereby Corn will grow near the Roots of ſuch Trees almoſt as good as any where in the Field, and Graſs as much or more under Trees as where none are, tho not altogether ſo ſweet, by reaſon of the droppings, yet the multitude of Fruit abundantly compenſates the damage almoſt Ten-fold.

Many Countries in *England* have experienced the benefit of Planting in the Fields, where it hath been of long and general uſage, and in many other Countries Gentlemen have begun already to imitate them, which ſhould much encourage others to follow; for the more there are that Plant, the leſs particular perſons will loſe by Thieves, and where Fruit is in great pleanty, it is found to be more ſlighted by Idle people; and beſides if a man hath ſtore, hee'l not feel the loſs of a little, or it may quit his coſt, to have one to caſt an Eye to them, for a months time near ripening; and further yet Cyder-Apples, Baking-Pears, and Pears for Perry are ſo little grateful to the Taſt (which Pilferers chiefly aim at pleaſing) that he that taſts them once, ſhall ſcarcely find his Teeth water after them a ſecond time. However the benefit of Planting in Fields much outweighs theſe and all other inconveniences; for by this means you may have a double Crop on your Lands, *viz.* Graſs or Corn, and your Fruit, and the Land rather benefitted (as the matter may be ordered) than damaged; One of theſe Trees alſo bears as much Fruit as three of the beſt in a thick-planted Orchard, the benefit whereof for Sale or uſe in a Family for Baking, or Liquors, or other uſes, is known to be ſo very conſiderable, that it's needleſs to ſay more of it.

Encouragements to Plant Pear-trees in Fields.

§. 2. Becauſe the Planting Pear-trees abroad in Fields is of leſs reputation generally than the Planting other Fruit-trees, to take off the aſperſion, conſider the following ſuggeſtions.

Firſt ſome Pears do not make ſo contemptible a Liquor as Perry is commonly reckon'd, but very ſtrong, and kept two or three years, drinks to admiration, ſo that ſeveral good Palates that have drank of it, have not been able to diſtinguiſh it well from Liquors of more eſteem.

Secondly, Their Fruit is not eatable and ſo in leſs danger of Thieves in your out-grounds than Apples are.

Thirdly, They will grow on barren Land where Apples will not proſper ſo well.

Fourthly, They are Trees of long continuance, and often grow to that bigneſs, and bear ſo plentifully, that one ſingle Tree will bear Fruit enough to make a Hogſhead of Perry, ſometimes two, or three in one year, which would ſave the expence of much Malt, tho the Liquor were but mean.

There are ſeveral ways of Planting in the Fields, all which are here ſet down, that every man may uſe that which ſuits beſt with his conveniency and good likeing.

How to Plant whole Fields.

§. 3. If your Land be in tillage, you may ſet Fruit-trees at thirty Yards diſtance from one another, throughout the whole Fields, in ſtraight and direct Rows, after the manner of an Orchard, and you may go on with your Plowing with the loſs only of about a yard, or four Foot Square of Land about every Tree for twenty years at leaſt, and when they are grown ſo big, that you think your Corn receives hurt by the ſhade or droppings of the Trees, if you can turn it to paſture, the Trees will improve moſt kind of Land, by keeping it warm in the Spring, they will make the Graſs come and grow more early, and by Shades in the Summer preſerve it from burning; but the Trees being ſet at ſuch a diſtance, the Land may continue for any purpoſe for ever, if you dreſs or Prune theſe Trees higher up than any other, that no Boughs may hang in the reach of Cattle, and for convenience of going about them with your Team to any work, and thereby the Air and Rain will have free acceſs to the Graſs, or Grain near about them, and the Fruit will be ſafer from common Pilferers. Theſe need no other fencing than Thorns bound about them, and a Stake driven in the midſt to keep them from ſhaking; becauſe you may receive the profit of the

Stubble or Fallow without ſuffering any large Cattle to come into the Ground, that will browſe upon them.

How to Plant Walks of Fruit-trees in Fields.

§. 4. Another way of Planting Fruit-trees in Fields is by ſetting Walks of them, running through the midſt, or along the ſides of your Paſture-grounds, where you have a mind to have Walks for ornament, or ſhady: for why Walks of Fruit-trees ſhould not be rather Planted than of Elm, Sycamores, Aſh-trees, *&c.* none can pretend a reaſon, there being ſome ſorts of Fruit-trees that will (and almoſt any kind may be ordered ſo as to) grow very handſome in ſhape, beſides the beauty and ſweet ſmell of the Bloſſoms, and worth of the Fruit.

To prevent damage by Cattle, if you go this way to work in Field Planting, they muſt be well grown before you ſet them, that is, they muſt be of about ſix years growth, and then well fenced, and there are two ways uſed to ſave them harmleſs.

To ſet Trees by Tumping.

1. One much commended is by Tumping them, and it's performed thus, *viz.* ſet your Trees in the place deſigned on the top, or almoſt on the top of the Ground, no deeper than to make it ſtand, tho all the Roots be not cover'd, till the Tump or Mound be raiſed about it; and then take a line about a yard and quarter long, tye the one end of it about the Tree, but ſo

that in going round the Tree with the Line ſtrain'd, it may ſlip about the Tree as you go; faſten the other end to an Iron ſetter or ſtick with a ſharp point, and as you go round the Tree, mark the Ground; Make then a Ditch on the out-ſide of the round Score, and lay the Turf handſomly two or three heights, with the Graſs-ſide outward ſo as to make the work full half a yard, or two Foot high; then caſt the Mold out of the Ditch, obſerving to throw the beſt of it next the Roots of the Tree, till you have raiſed it within as high as the Turf; then prick ſtrong Thorns into the Mold, that they may lye upon the Turf, and point outwards a yard over the Turf; as you place the Thorns, put more Turf or faſt heavy Earth out of the Ditch upon the ends of them, treading it down the better to fix them, and lay the Earth ſhelving down from the Turf towards the Tree, that if Rain fall it may ſoke towards the Roots; if you have any ſmall Thorns, Bryars, Furs, or Gorſe, lay it one the top of the work finiſhed round the Tree and repair all yearly as you ſee cauſe, which may be done with ſmall trouble. The following obſervations will demonſtrate the great convenience of ſetting Fruit-trees this way.

Firſt if your Land be over moiſt this Ditch will drain all wet from the Roots of the Tree; but if the Land be Clay or ſuch that the Water will ſtand in, then when you perceive it (which is very rarely) cut ſome little Notch or Trench to let it out.

Secondly, This way of ſetting is commended in dry Land; becauſe the Earth of the Mound will ſecure the Roots from the heat of the Sun, and every ſhower of Rain will much refreſh it, by ſoaking towards the Tree.

Thirdly, You need not bind your Tree to a ſtake which doth often gall and Hurt the Tree, for ſo much Earth about it will keep it ſteady,

Fourthly, If your Land be ſtiff, or ſtrong old Land, the Mound made of it will mellow and improve about the Roots, and alſo by that time the Roots ſpread as far as the Ditch, it will be fill'd up with Mold fallen from the Tump, and with ſticks, Leaves, *&c.* which will be rotten, looſe, and good for Trees to Root in, and by that time they will need little or no defence, if any at all; A few Thorns tyed about the bodies of the Trees, to keep Cattle from rubbing againſt them will be enough.

Fifthly, The Chief benefit of ſetting Trees thus, is, that where the Soil is ſomewhat too moiſt or ſhallow, the Tree being ſet on the top of the Land, will put forth it's Roots plentifully into the Earth caſt up, and thence ſhoot into the upper Turf and beſt Land that hath been Plowed and manured before.

Another way of Fencing is, by erecting at a Foot and a half diſtance one from another, about every Tree three ſmall Poſts, (if they be ſawed they need be but three Inches ſquare) or you may uſe Poles, or ſtraight Boughs, either whole, or if big enough, cloven in two, three or four parts, about five Foot above the Ground in height, being driven into the Ground, nail a croſs Bar of Wood from each to other, within a Hand's breadth of the tops of the Poſts, to which Bar, nail a Pale or two betwixt each two Poſts, ſtuck into the Ground or nail'd to the like Croſs Bar within a Foot of the bottom of the Poſts; the way of it may be ſeen now in diverſe places, and learn't in a Minute; though what's ſaid here makes it plain enough.

This way is more chargable than Tumping, where Timber is ſcarce, but much more dureable than it, and abſolutely neceſſary where Deer, or Rabbets, or any thing that peels the Bark off, come into the Land Planted.

§. 5. Another way of Planting in Fields which hath been ſucceſsfully Practiſed, is thus; When you ſcour a Ditch, and cut down or plaiſh an old Quickſet-Hedg, then ſet a row of Trees within a yard of the Hedg

Planting near Hedges in the Fields.

on that ſide that is not Ditch't, and Fence them with half-Round Tumps only on the one ſide, for the Hedg will ſecure them on the other, and from the cut or plaiſh't Hedg, you will commonly have Thorns and Bryars enough for the Mounds, to Fence it as hath been before directed; and at the ſame time, or in Summer, draw ſome of the Quickthorns, Hips, or Bryars, from the Hedg in o the Fence, about the Tump which will contribute to the ſtrengthening and preſerving the dead fence you had made about it before; ſo that you may be free from trouble about it for ever after.

There are theſe advantages in this way of Planting, *viz.*

1. The Ditch on the out-ſide the Hedg drains the Ground and makes it healthful and ſound.

2. The Ground near the Hedg is commonly very Rich, as not having been impoveriſhed by Tillage, but improved ſometimes by the often ſcouring of the Ditch, and commonly with the Dung of Cattle, that for ſhelter, Shade or Fodder repair thither.

3. Its not the leaſt hindrance to Plowing or Graſs; for the Hedg when its grown up, uſually beareth out as far as the Tree is ſet in the Field.

4. And this is much better than Planting in the Hedg Row, as many do; for in

a large top its apter to weaken the Hedg under it, but theſe being ſet a little diſtance from the Hedg, and growing (as they will) with the greateſt part of their Heads from it, will not damage it.

5. The Fruit may be gathered with much more eaſe, than of thoſe that are Planted in the Hedges.

6. They will not be choak't or hurt by the Hedg when its grown up, but be good handſome fair Trees.

You may ſet theſe at eight yards diſtance, or nearer, being but one ſingle Row, and ſo if but half a Field (as uſually it falls out) have the Ditch on the out-ſide, you may ſet a conſiderable number, and find advantage without damage, and with inconſiderable charge, eſpecially if the Ditch ſtand on the North-ſide, if you can, therefore chooſe ſuch Hedges.

This is not to be practiſed near Hedges that are full of great Wood, or Trees; but if there be but few Trees, its but leaving a vacancy near ſuch Trees, and ſetting your Fruit-trees againſt ſuch places, where there grow none in the Hedg.

How to Plant in Hedges in the Fields.

§. 6. Another way of Planting in Fields is this, if you would Plant without any charge of Fencing, you may do it in your Hedges; theſe Trees muſt be well grown and ſtrong, that the Hedg choak them not while they are young: and when you plaiſh or cut down a Quick Hedg, obſerve no certain diſtance, but as it happens where you find it moſt free from Quick, ſet a Tree and incloſe the Body in the Hedg, but bind not the Etherings too cloſe about it, leſt they gall and fret it, and as it groweth obſerve what Thorns annoy it, and cut them off.

Planting by the Cuttings of Gennet-Moils, &c.

§. 7. If you have a mind to ſet any Cuttings of Codlings, Gennet-Moils, or other Apple-trees that grow of Cuttings, they will proſper very well in, or rather near a Hedg; becauſe generally there the Mold is looſe and mellow for them to put forth Roots in, and ſomewhat enrich't by the frequent cleanſing of the Ditch; if you Plant them near the Hedg, you muſt a little Fence them on the one ſide, as by the third foregoing direction; but the Tumps you raiſe to ſet the Thorns in, muſt not be above a Foot high, for the Cuttings will ſhoot out their Roots, almoſt to the top of the Earth about them, and a high Mound falling down by degrees, ſome of the beſt Roots may be left bare, or very little Earth upon them.

The way of preparing Plants for this purpoſe, is by Circumpoſition, *&c.* as is directed in the 11 *Chap.* of Dwarf-trees.

Make choice of Cuttings or Stems as big as a Mans wriſt (if you can) towards the lower end; before you ſet them, prune them out of the reach of Cattle, and leave but little top on them when you ſet them, neither let them be very long; if the tops be out of the reach of the Cattle its enough.

Planting in Fields by long Crab-tree Stocks.

§. 8. There be ſome that get long Crab-tree-ſtocks out of Woods, or elſe dreſs ſome up in their Nurſeries to grow tall, and ſet them in their Fields or Hedges, and at three years ſtanding Graft them, which may do well and is better approved of, becauſe there needs no removal after they are Grafted (which is of great advantage as to make both good-bearing and ſound Trees) but ſome inconvenience there is in this way: the long Stocks out of Woods being commonly very old, their Bark thick, their Roots big, they thrive but indifferently; and thoſe raiſed in Nurſeries will ſeldom be taper grown, or ſtrong enough to bear a large top well, after they are Grafted ſo high as they ought, being ſet in Fields: You will alſo be longer in raiſing Stocks to that height, and any conſiderable ſtrength (as is neceſſary for this purpoſe) than in raiſing Trees, if your Stocks be Grafted young in your Nurſery, becauſe they thrive more after Grafting than before; and in both Caſes if you Graft them high, the Stocks will be continually putting out ſprouts of their own kind below the place they are Grafted at, which will require frequent cutting off; if you Graft them not very high you will find it difficult to defend them from the nipping of Cattle, and from the Cyens being broke out of the Stocks by ſome caſualties or other, to which they are more expoſed in Fields that lye common to Cattle, than Nurſeries that are incloſed.

Planting in Fields by Grafting old Crab-tree ſtocks.

§. 9. The way moſt uſed in Planting-Countries is by Grafting ſuch Crab-trees as grow in the Hedges or Grounds, and this is the ſpeedieſt way to have Fruit; becauſe the big Trees have Bodies already, and in four or five years time (well ordered) will have good tops to bear; and if you Graft ſmall Stocks in your Ground that have grown of their own accord there, and Fence them, they will ſpeedily bring on Grafts, being ſo well Rooted.

The miſchief of Grafting the bodies of old Trees.

§. 10. Many cut off the tops of old Crab-trees, or Apple-trees, and Graft the body or Trunk, but the Cyens could never cover the Heads of thoſe Stocks, and by that time the top was a little grown up, the body was ready to periſh with rottenneſs. The beſt way for big Crabtrees (or if you would change the kind of any Fruit-trees) is to Graft them in the Boughs, where they are not bigger than a Mans Arm, making uſe of none but thoſe that grow handſome at convenient diſtance one from another, cutting off the others ſmooth and even, cloſe to the Body of the Tree.

To do this, that Winter that you cut or plaiſh a Hedg, order the Workmen to trim up, but not to lop or top the Crab-trees, unleſs it be the tops of the Boughs two Foot above the place you intend to Graft them at, and then in *March* following ſaw off the Heads at proper places and Graft them.

Of Grafting old Trees in the Cleft.

§. 11. Many are for Grafting theſe in the Cleft; becauſe they think the Cyen hath beſt hold, and will not be ſo ſubject to be broke off, or out, by the Wind, as thoſe Grafted in the Bark; but many times thoſe in the Cleft are broke out by the Wind, neither can you perceive that the Wood of the Cyen in the Cleft did ever cement with the Wood of the Stock, but only on the outſide as the others do: And thoſe in the Cleft are not ſo apt to grow all of them, nor to make ſo great a growth as thoſe in the Bark, which with a little warineſs may be preſerved from danger of the Wind, and full as much care muſt be had about thoſe Grafted in the Cleft, if you will preſerve them all from the ſame prejudice.

How to Graft old Trees.

§. 12. You may obſerve the following difference in Grafting theſe great Boughs from all the forementioned varieties of

Grafting, and look upon it as a thing well worthy to be taken notice of and obſerved.

When you have prepared the Cyen as you are directed to do when you Graft in the Bark, apply it to the place you deſign to put it in, and ſlit the Bark of the Bough through on both ſides the Cyen cloſe to it, beginning at the top of the Bough, and not carrying the ſlits much above half length of the ſlope of the Cyen, ſeparate that little portion of the Bark between the two ſlits, from the Wood with your Inſtrument, thruſting it a little lower than the ſlits, to let in the Cyen as far as it is ſloped, and then ſtick the Cyen in, having firſt taken off from the edges of the Cyen any unevenneſs (not cutting through the Bark) that all may the better fit together, and you may put in two, three, or four Cyens in every head, having reſpect to the bigneſs of it ; or you may in the biggeſt put in two Cyens in the Cleft, and two others in the Bark, doing one of the later on the Weſt-ſide of it, for then the Wind blowing it towards the Head, is not ſo apt to break it out, as if it drove it from the head ; bind the heads and Clay them as you heard before, and continue to do ſo yearly till the heads are almoſt covered.

At firſt Claying, ſtick in Feathers or long Eſcures, to prevent Birds lighting on the Cyens.

In *July* following (whether you Graft

theſe big Stocks in the Cleſt or Bark) pick off moſt of the Leaves of the Cyens, and cut off ſuch ſprigs as growing inward will make the head thick, and all ſtragling out Boughs, that the Wind may not have ſo much force upon them to break the Branches out of the Stocks.

Cut off alſo ſome of the biggeſt Shoots the Crab-tree puts forth of its own kind; but for the firſt three years, you muſt not cut off all, leſt the Tree not having liberty to vent all the Sap that cometh up, ſurfeit and dye, the ſmall Grafts not being able to receive near ſo much Sap as the old top did the year before.

Thus many Country-men when they take off the head of an old Oak, have ſometimes found it dye, and therefore in ſome Countries, they leave one big Bough to grow for one year to draw up the Sap, (as they term it) whereas it is indeed that the Sap may have liberty to vent it ſelf; for Trees that have a thick Bark, as old Oaks have, when all the ſmall Boughs are cut off, are long in putting forth Branches; and difficultly at laſt put forth ſo many as will ſpend the Sap which comes up the Tree, in ſome proportion to what it did the year before, when the whole top was on, which Sap being chiefly in the greateſt Channel betwixt or near the Bark and out-ſide of the Body of the Tree, and not being vented, is either dryed or conſumed by the heat of the Sun, or putrifies for want of that continual motion that is in it, when it hath vent, that ſeveral Trees dye of this Diſeaſe; and when Trees dye this way the Bark will drop off from the Body of them ſooner by ſome years than otherwiſe.

Hence it is that you may kill a Tree, by lopping off the whole top in the Summer time, or ſo much of it that the remaining Boughs cannot receive all the Sap, but it lyeth choakt up for want of Iſſue.

The ſecond Summer you ought to bind ſome Hay-ropes, about the lower part of the Cyens; there will be no great need of repeating this the third Summer, but if done, it will the more certainly ſecure them from breaking by the Wind.

Thus you may ſecurely and ſpeedily Graft old Trees, that are either bad Bearers, or bear Fruit of bad kinds, and they will in three or four years bear plentifully, if you take care (which you always ought to do upon any Grafting or inoculating) to Graft them with kinds that experience of your ſelf, or others, can faithfully aſſure you to be of very good bearing kinds.

CHAP. XIII.

Of propagating and ordering Vines.

Soil proper for Vines.

§. 1. THe beſt Ground for them is a rich dry, light, Sandy Land, inclinable to Stony or Gravel, ſo it bind not; if it incline much to Brambles it's a ſign of apt Ground for this Plant; the richneſs of the Soil is not altogether ſo requiſite as the heat and dryneſs thereof; a ſhort Vine full of Knots or Joints is moſt fruitful, and fitteſt for our Clymate. The beſt Dung to Fatten the Earth they grow in, is Horſe or Sheeps-dung; make bare the Roots in the beginning of Winter, and throw in plenty of the ſame Dung moſt Winters.

Kinds of Vines to be propagated in England.

§ 2. Next be ſure to make choice of ſuch Grapes as are moſt ſuitable to the Engliſh Soil and Clymate, which is more ſubject to nipping Froſts and cold blaſts than *France* &c. and our Northern Country much worſe than the Southern for theſe Fruits (as well as all other) eſpecially, are better or worſe, and bear according to the place they grow in, if they have a proper Soil, be well ordered, deſed, have much Sun, as upon a South-Wall or upon the Eaſt-Wall which is beſt next, the Fruit will be better and ſooner ripe. And I have read that the Vine that yields Grapes in the Canaries, of which the Sack is made, was tranſplanted from the *Rhine* in Germany thither, and that it was no other than the Rheniſh-Wine Grape, which agreeing and improving in that Clymate, affords the moſt delicate Wine, far different from it's parents on the *Rhine*.

The ſmall black Grape, by ſome call'd the Cluſter-Grape, or Currant-Grape, is the firſt ripe, beares well, the Bunches are ſmall, but the Grapes ſo thick that you cannot put a pin between them, and is a very pleaſant ſweet Grape, and as fit for propagation as any. There is another ſort ſo them without Stones.

The next is the Red and White Muskadine, bearing well, large Bunches, and fair Fruit, and ripens in moſt years againſt a South-Wall; but the Red is not ſo good as the White.

The Red and White Frontin'ac, is a Fruit, of a very pleaſant haut-guſt, where it comes to perfect ripeneſs, which it ſcarce does, unleſs in a hot Summer, and it be Planted againſt a good South-Wall.

The Black or Red Orleance is a very good Grape, and ripens very well with us.

The great Blue-Grape, is very good Fruit, and ripens well with us.

The Canada, or Parſley-Grape, ſo call'd from the Country whence it came, and from the form of it's Leaf, being divided and Jagged like a Parſley Leaf, it's ripe ſomewhat late, but a good Fruit.

The Raiſin-Grape is a large and long Grape, but ripens not well in this Clymate.

The Burlet, is a very large Grape, but ſeldom ripening here.

Grape *de Arbois*, is a very good Grape.

The Burſarobe is an excellent large ſweet White Grape, and in ſome years ripens well, as alſo will the Muſcat.

The way of propagating Vines by Layers.

§. 3. The beſt way of propagating Vines, is in *November*, to Lay a Branch of that years growth into the Earth, under the old Tree, without cutting it off; lay as many Joints, or Buds in the Earth as you can, leaving but one or two out; for it puts forth it's Roots chiefly at the Joints; at a years end, or in the *February* come twelve-month cut it off from the old one, and Plant it where you deſign it ſhould grow; lay it in the Earth in the ſame poſture it lay in before, and alſo lay ſome of the Buds of the new Wood that grow out ſince it was firſt laid down; that it may gain the more Roots, leaving out of the Ground again not above one or two Buds.

Propagating Vines by Suckers and Cuttings.

You may chance to have Suckers of an old Vine which will be ſure to grow. Or you may take Cuttings of Vine-Branches of that years growth, and cut the bottom in ſhape of a Deer's foot on the under ſide, and ſet them in good warm looſe Land, and many will grow; if it be in the place you intend they ſhall always ſtand in, next year lay down a part of that which hath grown out, to Root alſo, or els upon removal lay in the new growth all but a Bud or two, with that part which is already Rooted; if it have made but ſmall growth the firſt year, lay part of the ſecond years growth in the Ground; it will more advantage them by helping them to good Roots, than the loſs of a year or two's growth in the top will amount to.

To help an old Vine.

§. 4. If you have an old Vine that beareth not well, lay down in *February* or *March* ſome of the ſtrongeſt Branches of the foregoing year, (that grow low) in the Mold under the old Tree, without cutting them off, leaving out of the Ground a Bud or two to grow, and your Wall will quickly be furniſhed with new and Freſh Branches; ſo that by degrees you may cut off many of the old Branches of the Vine; for tho one Vine may cover abundance of Walling, yet three or four Roots in that compaſs will ſtrengthen it the more to bear.

§. 5. As Vines ſtand in more need of Pruning than other Fruit-trees, ſo great care is to be taken in the performing of it; When you have ſet your Vine as you have been before directed, ſo that not above two Buds of it remain above Ground, you are to nail up ſuch Branches as grow forth up to the Wall, till it have over-ſpread as much Wall as you deſign for it, ſuffering not above two Branches to grow from the Ground, and ſnipping yearly the tops of the Branches a conſiderable length, as far as they are weak and tender, and alſo all ſmall poor ones, cloſe to the body, unleſs the well-liking Branches be but few, and then you may leave the loweſt Bud of ſome of them, to grow forth next year, and this you are to do yearly towards *February*, or the beginning of *January*.

Of Pruning Vines.

When your Vine comes to bear, you are to uſe your Knife about it three times in the year.

Firſt at fartheſt in *February*, and the begining thereof you are to prune off part of the foregoing years Shoots where they are too thick, cloſe to the old Wood. As it enriches your Vine to keep it thin of Branches, ſo you muſt take care it be well ſtored with Buds againſt the Spring following, for it bears Grapes only on the new Shoots of every year; and in cutting off theſe Branches, you muſt take care your Wall continue furniſhed with ſuch Branches as may be ſpread upon the Wall regularly and decently, not thick in one place and thin in another, nor croſſing out another. On every Sprig you cut off in this Pruning, where you would have Fruit the ſucceeding year, leave two or three Buds, for out of thoſe Buds, eſpecially the ſecond or third, proceeds the Cluſters; alſo cut off the Branch aſlope on one ſide or under, that the Rain reſt not on the Pith of the remaining part.

Secondly, The next time to take off ſuperfluties from your Vine is about Midſummer, when the Grapes are knit; clip off then the end of the Branches that have Grapes on them, a little above the Grapes, that they may have the more nouriſhment and keep them nail'd to the Wall, as alſo barren Branches where the Wall needs them.

Thirdly, The laſt time of cutting is in *Auguſt*, for then, becauſe Leaves and Branches may be ſo thick, as to keep the Heat of the Sun from the Grapes, which is neceſſary to ripen them, you may pluck off ſome of the Leaves, and cut off ſome of the Branches to open way for the Sun to come to them.

There's on thing to be obſerved in Pruning theſe, peculiar to it, that whereas others are cut at a Bud, the Branches of theſe muſt be cut off near the midſt betwixt two Buds, and that not later in the year than the beginning of *February*, for afterwards the Sap or Juice will run out, and the Vine will be much weakened by bleeding. You will by that time alſo ſee what the Froſt of the Winter foregoing hath kill'd, which muſt be taken all away.

Note. that December *and* January, *are the beſt times for tee Winter Pruning of Vines.*

If Froſts come before any Grapes are ripe, defend them in the night time by Tilts or Mats.

Vineyards proſper not in England.

§. 6. It's not worth your labour to Plant Vines by Eſpaliers, or in a Vineyard in *England*; becauſe of the early nipping Froſts which our Clymate is very ſubject to, which is the reaſon ti's ſeldom uſed, and the uſage of people in ſuch caſes affords no weak Argument that it's of no advantage; And Grapes ſeldom or never ripen well in this Iſle, without great help of Art and induſtry, to which purpoſe take theſe directions.

Firſt, To Plant ſuch as ripen ſooneſt in the year, that they may have as much of the Summer heat at ripening time as may be.

Secondly, Let the Wall you Plant them againſt, be a full South, or but a little inclining to the Eaſt; or if you have a half round, or corner in a Wall, or the back of a Brick Chimney, or a Kiln-wall, or Barn-wall poſited as aforeſaid, make uſe of ſuch places for them.

Vines will proſper and bear well againſt a high Wall, yet that is not altogether ſo neceſſary but that low Walls may ſerve turn, and the higher may be reſerved for ſuch Fruit-trees as will not do well without them. That of a Tarras Walk may do well for Vines, and the Gravel Walk under the Wall mightily encreaſe the heat about them.

If you Plant any Trees againſt your dwelling-houſe Wall, there may be ſome narrow places between two windows, or the like, where other Fruit-trees have not room to ſpread: a Vine may grow up there, and above thoſe narrow places enlarge it ſelf where ever it meets with room.

You may alſo Plant a Vine betwixt every Fruit-tree that groweth againſt your hotteſt Walls, and let it ſpread a little in the Summer time into the Fruit-trees on either ſide, eſpecially if the Fruit of ſuch Trees uſe to be early ripe, or that they bear little Fruit, or have not been ſo long ſet as to have covered the Wall. And tho ſuch Vines cannot extend themſelves to that bigneſs, as thoſe Planted where they have more room; yet by this means you will make advantage of ſuch portions of your Wall, as otherwiſe you could have but little benefit from.

Some Vines Shoot forth exceeding large Branches yearly, but bear little; in ſuch caſes bare the Roots, and cut off a Maſter

Root, or two from the Tree, then lay ſome Sand, Aſhes, or any hot barren Soil to the Roots, and it will abate the redundancy of Sap,and conduce to bearing Fruits.

§. 7. Do not pull or cut off your Vine-Leaves in *Auguſt*, or *September*, with deſign of giving acceſs to the Suns heat, thereby to acclerate the maturity of the Fruit, as many frequently uſe to do, and as is before directed in *Sect.*5. for on my own experince, ſuch depriving the Grape of it's Leafed ſhelter from the cool Air,or morning Froſts, hath always proved pernicious and deſtructive to the Grape; and I have often obſerved the beſt Grapes and earlieſt ripe, to be under the ſhadow and Protection of ſome Leaf.

CHAP. XIV.

Of Figs, their kinds, and propagation.

Figs. FIgs are a Fruit that agree with Engliſh Palats and Soils much alike, there being few that affect them. Among the ſeveral ſorts of them, there are two of chiefeſt note among us. The great blew Fig, as large as a Katherine-Pear, and which is moſt common, and bear their Fruit to perfect ripeneſs, if ſet againſt a South-Wall, and ſpread thereon with Nails and Leathers, and Planted on warm Land.

And there is the Dwarf blew Fig, that's ſooner ripe and better taſted than the former, but the Tree and Fruit is leſſer.

Fig-trees ought to be Planted in a very warm place, againſt a Wall defended from the North and North-Eaſt Wind: every old Tree will yield plenty of Suckers fit to raiſe new ones from beginning of *October*, untill Candlemas; or they may be raiſed by Layers; as Vines. Prune them no more than extream neceſſity requires.

CHAP.

CHAP. XV.

Of Walnuts, their kinds and propagation.

§. 1. THere are ſeveral ſorts of Walnuts, ſome being larger, others thinner ſheld than the common, but differ ſo little one from another that Men have not much minded giving them Names; the largeſt ſort is uſually call'd the French Wallnut; the beſt are thoſe of a tender thin ſhell, of a full Kernel, and of a middle ſize. *Kinds of Walnuts.*

§. 2. Walnuts are much Planted of late, and are very proper for Walks in Grounds, and a good Fence to ſhelter Buildings and Orchards; the Fruit is uſeful, and profitable if you can ſpare any to ſell, or for Oil for Painters, if the Markets ſhould be glutted with them, and the Timber ſo excellent for Tables, Chairs, Stools, and the Stocking of Guns, *&c.* that it goes off well, and takes a good price. *For what Walnut Trees are good.*

Way of raiſing Walnuts.

§. 3. They are raiſed by Nuts gathered from the ſame Trees: if you can, let them have their Green Husks on them, for the bitterneſs thereof will defend the Kernels from being eaten by Worms before they ſpring up; but you muſt chiefly reſpect their full ripeneſs, at which time they are apt to ſhed their Husks; you may either ſet them as they come immediately from the Tree, or keep them in the Sand till *March*.

Set them in rich, dry, warm Land, little more than an Inch deep, and when you tranſplant them, ſet them as ſpeedily as you can after taking up, and cut off little of the Roots, but by no means the Sap or heart-Root (as in other Trees) and top them not at all, if you can help it; but if the Tree be ſo tall, crooked, or dead at the top before removal, then you muſt put a Peg, or ſome ſoft Wax into the Pith-Pole, or cover the Cut with Clay, that wet may not get in, and make it dye downward, becauſe theſe Trees have a large Pith; when you do cut off the top, do it if you can, at a ſide-Branch or Sprig, and that will ſpread under the Clay and cover the tops again; you may cut off many ſide-Branches when you tranſplant them.

No Cattle will brouſe or peel them by reaſon of their bitterneſs, ſo that a Fence that will preſerve them from Cattles rubbing it ſufficient.

§. 4. They will grow in looſe Gravelly, Stoney, or almoſt Rockey Land, and beſt where they are firſt ſet without being removed, to which end you may in ſuch a Hillock as is ſpoken of in Field-Planting (but not ſo broad nor ſo high) ſet three or four Nuts, or more, and about two years after they are grown up, pluck up gently all but one of them, that is likely to make the beſt Tree. *Soil proper for Walnuts.*

CHAP. XVI.

Of Cheſnuts.

THe beſt Cheſnuts among us are thoſe that come from beyond Sea, but of thoſe that grow with us, ſome are larger than others, without any difference worth obſervation.

Cheſnut-trees grow to be very large, and bear good Fruit on a hot dry Land; they are excellent for a defence from Winds, and better then Walnut-trees, but of much ſlower growth; It's not good to top them as ſome do when they tranſplat them.

They are raiſed by ſetting Nuts an Inch and half deep, that come from beyond Sea, at the end of the year; or from good Nuts well ripened in *England*, which you may ſet with the Husks on when they are fallen, or rather kept in Sand till the great Froſts are over: theſe Trees grow beſt likewiſe without being ever moved, ſome ſay that they will grow well being Grafted upon Oaks, Beeech, or Walnut-trees.

The Horſe-Cheſnut groweth of Layers, and makes delicate Trees for Avenues.

CHAP. XVII.

Of Filbeards.

THere are two ſorts of Filbeards, diſtinguiſht by the colour of the skin of their Kernells, the one being Red, and the other White: There is another ſort, call'd the Filbeard of *Conſtantinople*; the Leaves and Fruit of which, are bigger than either of the former: And there is beſides theſe an excellent large plump Nut, that hath a very good Kernel, the beſt of which have a very thin ſhell.

Filbeards and Hazle-Nuts worthy to be Planted in Orchard's or Gardens, are raiſed from Nuts ſet in the Earth or Suckers from the Roots of an old Tree, or may be Grafted on the common Hazle-Nut-Tree.

CHAP XVIII.

Of Quinces their kinds and propagation.

THere is not a more delicate Fruit for the Kitchin and Conſervatory than the Quince, whereof there are ſome ſorts, though not many, ſomwhat different from each other.

The Portugal Apple Quince, is of beſt eſteem, it's a large yellow Fruit, tender, pleaſant, and ſoon boiled.

The Portugal Pear Quince is much like the former, except in it's form.

The Barbary Quince is good, but ſmall.

The Lyons Quince is a large yellow, and the Brunſwick Quince a large white, both good Fruit, but inferior to the two Firſt.

The Engliſh Quince is the moſt Stony, and a harſh Fruit, and covered with a Doun or Cotton.

The way of raiſing Quince-trees is by Suckers, Cuttings, as you are taught in the Eleventh *Chap.* aforegoing; and it's only to be added that if you have a part of a

Tree that groweth ſo low, that you can bring it to the Ground, either by Plaiſhing or otherwiſe, you may do it in the beginning of Winter, and cover it all with Earth but the ends of the Branches, and let it continue ſo one year, and then uncover it, and every Twig will have put forth Roots in the Earth, which being cut off, and tranſplanted will make you a Tree.

How to propagate by Layers.

And this is the way of propagating Fruit-trees by Layers: And you may here take notice, that all ſuch Trees that may be propagated by Cuttings, as Currans, Quince, Gooſberries, Raſpberries, Barberries, Figs, Vines, Mulberries, *&c.* may be raiſed likewiſe by Layers, and this way takes more ſure than by Cuttings. Trees generally have large Pith that will grow by Cuttings and Layers.

Quince-trees delight, and bear beſt in a fat, moiſt, rich Land, where ſome Sinck, or Gutter that carries away the ſoke or Waſh of a Dunghil or Houſe, is a place uſually choſen for them, and is ſuch as they like very well in.

Some will Graft or Inoculate Quince-ſtocks, with Grafts or Buds from Quince-trees of good bearing kinds, which will cauſe them to bear more early.

CHAP. XIX.

Of Mulberries.

MUlberries are diſtinguiſhed by their Colours, for there are Black, Red, and White.

The Black Mulberry-tree never fails of Fruit after it's grown up, but the White ſeldom bears well.

They are raiſed by Suckers, Layers, or Cuttings from the Branches or ſides of the Tree.

Theſe following Trees and Shrubs are very apt to grow of Cuttings or Slips, as Codlings, Gennetings, Brets, Gennet-Moils, Quinces, Goosberries, Currans, Figs, Vines, Tamarisk, Honeyſuckles, and Roſes in ſome Grounds. By Laying, almoſt any ſort of Trees or Shrubs will grow, if a little Inciſion be made, as the beformentioned and Mulberries, Cornelions, Lime-trees, Gelder-Roſes, Roſes of all ſorts. The Seaſon for ſetting of Cuttings of Trees to grow, is from the full of the Leaf untill Candlemas. The Seaſon to encreaſe Trees by Laying, is from Michaelmas to the beginning of *March*, and ſomtimes in the Spring or Summer.

CAAP. XX.

Of Medlars, and Service-trees.

THere are three or four ſorts of Medlars, the biggeſt ſort, call'd the great Dutch Medlar without any Thorns upon the Branches, is the beſt, and a good bearer; the common hath Thorns upon the Branches; and there is another ſort without any Stones in the Fruit.

There are two ſorts of Services, one larger than the other, that groweth wild in the Woods, but neither the ſorts of theſe, nor of Medlars, are diſtinguiſhed by names, and the Fruit of both is not eatable till they are rotten.

Medlars are raiſed by Grafting on the Pear-tree, Crab-tree, White-thorn, or Service-tree, the laſt is the beſt, and the White-Thorn by much the worſt.

You may get Plants of ſervices out of the Woods, where they grow wild, from which you may raiſe Service-Trees, or Stocks for Medlars; or if you can get none ſuch, Graft the ſervice on the Wickey-Berry Tree, or the White-Thorn.

CHAP.

CHAP. XXI.

Of Goosberries, Currans, Raſpberries, and Barberries.

§. 1. GOosberries ſo call'd from the uſe that hath a long time been made of them, in the Kitchin when Green Geeſe are in ſeaſon. *Goosberries.*

There are ſome varieties of Goosberries, the beſt ſorts are the Amber, and great Hedghog Goosberry, which is prickly, but the other ſmooth, both of a bright Yellow colour, and the great White Holland, or Dutch Goosberry, which is large, tranſparent, and a great bearer. The great Yellow Dutch Goosberry, differeth from the laſt only in colour. The great early Red Goosberry is a fine, ſharp, pleaſant Fruit, and firſt ripe; there are likewiſe ſome that are Blue, differing little from the former, but later ripe, and the Great Green Goosberry late ripe, but good; and there are ſeveral ſmall Goosberries not worth Planting or taking notice of.

Currans. §. 2. Currans or Corinths, taking their name from *Corinthia* where firſt had. The great White Dutch Curran, and the great Red Dutch Curran, are the faireſt, largeſt and beſt, and the great Yellow Dutch Curran differs only in Colour, all others are to be ejected out of your Gardens; the Engliſh and Black Currans not being worth Planting in compariſon with the White and Red Dutch Currans. The great Dark-red Dutch Curran is largeſt, and hath a ſweet reliſh, and ſince it became a Native of our Soil, is much improved, where Planted in rich moiſt Grounds.

Barberries. §. 3. Of Barberries there is the ordinary, or common ſort, and Barberries without Stones, and the great Barberry, which is a ſort bearing bigger Fruit than either of the other.

Rasberries. Of Rasberries there are three ſorts; The Common Wild; The large Red Garden Rasberry, a pleaſant Fruit, and yields a delicate juice, And the White Rasberry little inferior to the Red.

Goosberries, Currans, Rasberries, and Barberries are beſt raiſed by Suckers, of which you may have plenty about the Roots of old Trees. And Goosberries, and Currans may be propagated by Layers, or by Branches, or Shoots cut off and ſet; they are to be ſet four or five Foot diſtant from each other upon Borders, or

Beds of rich moiſt Land: The ſeaſon for Planting them is from Michaelmas to Candlemas.

Currans and Rasberries will proſper and like very well in ſhady places, and the colder the Soil, the better will Rasberries bear and thrive.

Rasberries uſually bear the ſame year they are ſet, if drought, or too late Planting hinder not; and that which bears this year, dyes after bearing, and what Springs new this year bears the next; Cut no more of them than what will make them a little handſome, and in the Winter cut or break out all the dead Stalks from amongſt the living Rasberries.

When Currans, Goosberries, and Barberries have grown ſome years, ſuffer not too many Suckers to grow about them, nor cut the tops to a round cloſe Buſh, as many Gardiners do, whereby they grow ſo thick that they neither bear, nor ripen their Fruit ſo well as if the grew taller and thinner.

All the ſaid Fruits (*viz.* Goosberries, Currans Barberries and Rasberries) like well in ſhades, tho the Fruits are not of ſo delicate a taſt, as thoſe that grow in the Sun: You ought to keep the Ground about them free from Weeds, and other Vegetables, and to Dig, and well Manure it each two years at Michaelmas, and yearly with a pair of Sheers about fourteen days before Midſummer dub the tops of Currans and Goosberries and they'll bear better; do the like at Michaelmas.

CHAP.

CHAP. XXII.

Of the kinds of Peaches, *and Nectarins.*

§. 1. THe Stones of Peaches produce Trees that will bear Peaches, ſomtimes better than the Peaches out of which the Stones were taken, altho thoſe Peaches grew upon a Tree that was Inoculated on a Plum-ſtock: And therefore ſome Gardiners by ſetting many Stones of the Newington-peach, have found ſome amongſt the Trees come up from them, to bear a Fruit rather improved than worſe, and by giving it a new name, and Inoculating from it, have made good gain of it; but this is not a practiſe for every private perſon; becauſe Peach-trees ſo raiſed, will be much longer before they bear Fruit, than thoſe which are Inoculated; and becauſe he muſt run the hazard of filling great part of his Wall with theſe Peach-trees thus raiſed from Stones, and not one, it may be, in an hundred prove any thing extraordinary, and the reſt of no uſe, unleſs for Stocks; after he hath waited ſeveral years to ſee what Fruit they will bear.

§. 2. Of Peaches the firſt and ſooneſt ripe is the White Nutmeg, next that is the Red Nutmeg, next to that is the Troy, which is ripe almoſt as ſoon, and a better Fruit; next ripe are,

The

- *Iſabella*
- *Savoy*
- *Early Newigton*
- *Burdeaux*
- *Old Newington*
- *Violet Muſcat*
- *Perſian*
- *Modena*
- *Morello*
- *Rumbullian*
- *Scarlet*
- *Bellice*
- *Royal*
- *Ricket*
- *Bloody Mounſieur*, one of the lateſt, and Red within and without, and an excellent Fruit.

Peach.

These are accounted excellent kinds of Peaches, and there are many other good ſorts beſides theſe, and ſo there are of Apples, Pears, *&c.* more than are mentioned in this Book, or is neceſſary to trouble the Reader with; ſome choice Fruit of every kind being here nominated, for every one to pleaſe his fancy with, or ſtore himſelf with them or others, as he approves them, or hath convenience ſo to do.

Nectarins.

The beſt Nectarines are.

The
Red Roman
Murry
Tawny
Paper White
Nectarins.

There are others though worſe ſorts as,

The
Yellow
Painted
Ruſſet
Red
Nectarines.

The Algier Nectarine is commended by ſome; becauſe it parts eaſily from the Stone.

CHAP. XXIII.

Of the kinds of Apricocks, and Strawberries.

APricock, ſo call'd from *Apricus*, delighting in the Sun, is a kind of Plum, but far exceeding others in every reſpect.

The Algier Apricock is early ripe, and in *June*, it's a ſmall round and Yellow Fruit.

The Maſculine Apricock is a better and earlier Fruit than the former, but not ſo good a bearer.

The Turkey Apricock is much commended, ſo is the Orange; the white Apricock is accounted better than the Common.

They are to be propagated only by Inoculating upon the White Pear-plum Stock, or White Wheat Plum-ſtock, or ſome Plum-ſtock which is Sappy, of large growth, free, and bears large Leaves, Shoots and Branches.

Strawberries. Strawberries will grow under the ſhades of more lofty Trees.

The common Engliſh Strawberry is much improved by being tranſplanted from the Woods and Hedges into the Garden.

The White Strawberry is more delicate than the former.

The Long Red Strawberry is not altogether ſo good as the former.

The Polonian, or Great Strawberry is the largeſt of all Strawberries and very pleaſant.

The Green or Rasberry Strawberry is the ſweeteſt of all Strawberries and lateſt ripe.

The New *England* or *American* Strawberry is the earlieſt ripe of any Engliſh Fruit, being often ripe at Midmay, and continues bearing till Midſummer. They are the faireſt (except the Polonian,) and of the beſt Scarlet dye of any Fruit that grows, and very pleaſant and cool to the Taſt. They are propagated by ſetting of the young Roots (chiefly in the Spring and Fall) which increaſe from the Strings that run from Elder-Plants, and the Strings muſt be very often cut, and they Weeded.

CHAP. XXIV.

Of the kinds of Plums.

IN Berries the white is commonly more delicate and ſweet in Taſt than the coloured, as is ſeen in white Grapes, white Raſps, white Straw-berries, Currants, *&c.* but in Fruits the white is commonly the meaneſt, as in Plums the white Harveſt Plum is a baſe Plum, the Muſle, Damazeen, and other black Plums are of the beſt, *&c.*

There is great variety of Plums, and they appropriated to ſeveral uſes, they continue longer on the Trees than Cherries, and are a more pleaſing, but not a more wholſome Fruit.

Plums to be preferred before others are as follow, The Red and Blew Primordian, as being firſt ripe, tho not ſo good Fruit as ſeveral of the following.

The

Morocco
Myrobalan
Violet
Apricock, a delicate Plum, and parts clean from the Stone.
Barbary
Black Damaſcene
Green Damaſcene
Prunella
Queen-Mother, one of the beſt Plums.
Kings
Matchleſs
Black Pear Plum
Peſcod
Catalonia
Bonum Magnumque, a fair yellowiſh green Plum.
Black Date
Cheſton
Marbled
Imperial, one of the largeſt of Plums.
Nutmeg
Turkey
Prince, laſt ripe.

Plum.

Theſe Plums you may ſet to a Wall, tho moſt of them will bear well being Dwarfs, or Standards, if you have not Wall enough.

The white Pear Plum, Prune, Damſons, and Verdock, are good preſerving Plums.

The
Muſcle, one of the beſt *Plums*
Wheat.
Lammas
Plum.

And Bullice, and Damſons, and ſeveral courſe Plums are raiſed by Suckers, without Grafting or Inoculating, and may be ſet in Orchards, Hedges, or any common places.

The drieſt Plums which part clean from the Stone and are of a black or inclinable to a Black or Red colour, are accounted beſt.

Plums are beſt propagated by Grafting.

CHAP. XXV.

Of the kinds of Cherries.

THe *May* Cherry is firſt ripe, and ſhould have a good Wall to expedite it's ripening; for tho they are but ordinary Fruit, yet their earlineſs makes them a rarity: next ripe are.

The
- *Duke*
- *Arch-Duke*
- *Flanders*
- *Red-heart*
- *Lukeward*, one of the beſt of Cherries.
- *Cluſter Cherry*, bearing three, four or five uſually on a Stalk.
- *Bleeding-heart*
- *Spaniſh Black*
- *Naples*
- *Carnation*, a delicate Fruit for the Table or conſervatory.

Cherry.

The { *Amber*, the Grater.
Purple, one of the beſt
and lateſt Cherries
and a good bearer. } Cherry.

The great bearing Cherry of *Millain*, and Morella, are Blackiſh when ripe, and Blood Red within, excellent to make Cherry Wine, affording a ſtrong and Vinous Liquor.

Theſe *viz.* the Cherry of *Millain*, Morella, Cherry, and Prince Royal Cherry are good to preſerve.

If you have not room upon your Walls, theſe will bear well in any warm place, Planted as Standards.

Thoſe that you find put forth ſmall Twigs, and have a ſmall, dark, Green Leaf, are eaſilieſt kept for Dwarf-trees.

CHAP.

CHAP. XXVI.

Of Pears and their kinds.

PEars are of very many kinds, in ſo much that ſome have affirm'd that there are no leſs than four or five hundred ſeveral kinds; but however, certain it is there are ſo many, that to trouble the Reader with their names would be very needleſs, therefore ſome of the Choiceſt for all uſes will be moſt proper for the ſtoring your Plantation, eſpecially if you reſpect profit more than curioſity, which is the main deſign of this little Tract.

Pears are much improved, as is moſt Fruit by being Planted againſt Walls. In *France* they are accounted among their beſt Fruit, and the beſt kinds well merit it.

The Summer and Winter-Bon-Criſtien growing pendent are fitter for a Wall, than to be Planted of Standards; the Winter will keep till *May*, and is a very choice Pear.

The Bury de-Roy, is eſteemed for the Table the beſt of all Summer Pears, it's a fair Brown Pear, excellent in it's ſeaſon, melting in the Mouth, thence call'd the Butter-pear, and bears well againſt a Wall; the Green Bury-pear, is more Green, and larger than the former.

The
Violet
Dove
Grean Musk
Amadot
Rouſellet
Meſſier Jaen
Great Soveraign
Blood
Windſor
Green-field
Dionier.
Great Burgamot
Virgalous
Roſhea one of the beſt of Pears.
Red Katherine
Pear.

The Double Flowred Pear keeps till *May*, not fit to eat till *March*, theſe do well Planted againſt a Wall: If you have not Wall room enough, ſuch as grow with ſmall Twigs, or almoſt any Grafted on Quince-ſtocks, may be kept Dwarfs. The Winter and Summer Burgamots may alſo make Dwarfs.

Meet Pears for Standard-Trees in Common Orchards, are ſuch as follow, both for Summer and Winter-fruit.

The
Hill
Primating
White Geneting
Red Geneting
Green Chiſſel
Pearl
Soveraign
Orange
Red Katherine is the beſt of *Katheriues.*
Anthony
Sugar
Lyons a rare Winter Pear for the Table,
Pimp
Berry
Popering
Deadmans
Scarlet
Prick
Royal
Nonſuch
Kings
Ladies Buttock
Muſcat
Oak
Virgin
Lyons
Ice
Pear.

The
Gaſcoign Burgamot
Winter *Popering*
Little Dogobert
Great Kairville
Long Burgamot
Pear.

With divers others, each Country affording variety.

The Slipper, and the Lewis Pear by ſome call'd the Maiden-heart, is the beſt off all Pears to dry, and a good bearer.

In Fields you may ſet Baking Pears, and Perry-Pears for Baking.

The
Norwich
Quince
Biſhops
Arundel
Bell
Painted
Pear.

The great Black Pear of *Worceſter*, or *Perkinſons* Warden, is to be prefer'd before all other Pears for Baking; the Pears uſually weigh twenty ounces, ſomtimes more, and it bears very well againſt a Wall. Alſo Wardens of ſeveral ſorts are good for Baking.

Pears for Perry are the Red, and White-horſe Pear; and there are alſo divers other wild or Choak-pears, whereof the Red coloured yield the ſtrongeſt Liquors. The

Bosberry, and the Bareland Pears are by much the beſt for Perry, yet taken notice off, the Tree that bears the Bosberry-Pear will grow to that Bigneſs, that it will bear Fruit to make one, two, or three Hogſheads of Perry in one year: their might be much ſaid of it's excellency when it's two or three years old. The Tree will proſper on almoſt any courſe Land.

The Turgovian-pear, mentioned by the ingenious Mr. *Evelin* in his *Pomona*, is ſaid to yield the moſt ſuperlative Perry the World produces, and it were wiſhed the ſame was more generally propagated.

Pear-trees require not generally a very rich Ground, but will proſper beſt on Stony, and light Land.

CHAP. XXVII.

Of Apples and their kinds.

§. 1. APples are ſeldom Planted againſt a Wall: therefore it's beſt to furniſh your ſelf with the choiceſt of theſe following for Table Fruit, by making them Dwarfs in the Garden, or larger Trees in a ſecure Orchard, being very tempting Fruit, and ſome of them early ripe.

The Jeniting is early ripe, and a Fruit off a pleaſant taſt.

The Margaret or Magdalen is the beſt and moſt early, commonly ripe about Saint *Margarets* day in *June*; it's a fair Beautiful Fruit, of a pleaſant taſt and ſcent, and not equall'd at that time for the Table, and Kitchin.

King Apple, tho not a Common, yet eſteem'd an excellent Fruit, and preferr'd to the Jeneting.

The Aromatick or Golden Ruſſeting Apple hath a Gold colour'd Coat under a Ruſſet hair, with ſome Warts on it, it's Fleſh of a Yellow colour, and form of a flattiſh Round not ripe till after Michaelmas, lives over the Winter, and the moſt pleaſant taſted Apple that grows, having a delicate Aromatick haut-guſt, and melting in the Mouth.

The Flax Apple a good early Apple.

The Spice Apple in ſome places much valued.

The Summer Queening mixt with others, a good Cyder Apple, being of it ſelf ſweet.

The Go-no-further, or Catſhead-Apple a large Fruit with Red ſides.

The Golden Pippin is ſmaller than the Orange Apple, but like it in colour, taſt, and long keeping, and the Trees are great bearers.

Bontradue, or good Houſwife is the largeſt of Apples, a great bearer, and good for the Kitchin, and makes good Summer Cyder.

The Giant Apple is a large Fruit and well taſted, the beſt of any Summer Apple for Kitchin uſes.

The Pome-Water is an indifferent good laſting Fruit.

The Summer Pearmain is known to be an excellent Fruit, but not ſo good as the Winter Pearmain.

Kirton Pippin or *Holland* Pippin is one of the beſt ſorts of Table-Fruits from Michaelmas to Alhallontide, and yields very good Cyder.

The Orange Apple is of the colour and form of an Orange, hath a fine rough Gold coloured coat, reſembling the Golden Pippin, only fairer, is of a very pleaſant taſt, and will keep long.

Summer Bellabon is a fair Apple, the Tree a good bearer and the Fruit very good, but will not keep any long time.

Ruſſet Pearmain a very pleaſant Fruit, continuing long on the Tree, and participates both of the Ruſſet and Pearmain in colour and taſt.

The Paradiſe Apple is a curious Fruit produced by Grafting a Pearmain on a Quince-ſtock.

The Famaguſta is one of the beſt early Apples.

§. 2. There are alſo ſome Apples of great eſteem in their reſpective Countries, as,

The Darling Apple is much valued in *Cheſhire*.

The Stocken Apple in *Herefordſhire*, tho not known by that name in many places.

The Golden Renating in *Hartfordſhire*, a very pleaſant and fair Fruit, and it ſomething reſembles the Pearmain, the Trees great bearers, but ſubject to Canker, the Apple keeps well.

The Angles Bit in *Worceſterſhire*, a delicate taſted Apple, Kirton Pippin in ſome parts of *Northamtonſhire.*

The Harvey Apple in *Cambridgſhire*, a choice Fruit, but the Trees no good bearers.

The *Devonſhire* Quarrington is a very fine early Apple.

The Bitter-ſcale in *Devonſhire* much eſteemed, yielding excellent Cyder without the mixture, or aſſiſtance of any other.

The Underleaf in *Herefordſhire*, an Apple of a Rheniſhwine Flavor, and may be accounted one of the beſt Cyder Apples.

Deans Apple is well eſteemed of in *Devonſhire*, on the ſame account that the Bitter-ſcale is; and ſo is the Pleaſantine Apple.

§. 3. The ſubſequent Apples are good Winter Fruit, and ſuch as may be Planted in Orchards. And obſerve that long laſting and fair Apples, will not only adorn your Table, but yield moſt profit, either for the family or ſale, for one Buſhel of good Apples after Chriſtmas may be ſold for three times more, than the ſame Fruit would have taken at Michaelmas; and your long keeping Fruit is of good uſe and profit untill new come, as well for the Table, and Kitchin, as Cyder.

The Winter Pearmain.

There are three ſorts of Pearmains, and the larger ſort is more pulpy than the ſmaller, and keeps not ſo well, they are all of them excellent Fruit, but the Winter is beſt.

The Winter Queening is a very good Table Fruit, and ſo is the Quince-Apple.

The Nonſuch Apple is a long laſting Fruit and good at the Table.

The Pealing is a long keeping Fruit, makes good Cyder, and the Trees are great bearers.

The Leather-coat a good Winter Fruit, and long liver, ſo is the Golden Doucet.

The Pome Roy hath a good taſt, a pulpy ſubſtance, and not yielding much juice, yet that which is, is very good.

The Lording is a fair, green, and ſharp Apple, a conſtant bearer, being a hardy Fruit, and for the Kitchin only, and hath little Core.

The July-flower is of a pleaſant taſt, and long laſting, a thick rind, and hard Core, well ſtripped, good for Cyder, making an excellent mixture.

Pear Apple is a curious pleaſant Apple, of a rough coat, but the Tree no great bearer.

Greening is a good Apple, of a Green colour, and keeps to a ſecond year.

Lones Pearmain is call'd by ſeveral names in ſeveral places as the Marygold-Apple, Onyon-Apple, Kate-Apple, John or Joanes-Pearmain; It's a very good long laſting Fruit, fit for the Table, Kitchin, Conſervatory, or Cyder, having a good juice, bears every other year to admiration, the intervening years but a few, and there is another of them call'd the Summer Marygolds.

Green Ruſſeting is a tough and hard Fruit, long laſting and of a pleaſant taſt.

Red Ruſſeting is of a leſſer ſize, but an excellent Apple and long laſting.

Pome-water is an indifferent good laſting Fruit.

Winter Fillet or Violet is an excellent Cyder Fruit, yielding a delicate Vinous juice.

Winter Bellabon is a great bearer and keeps well and is a fair Apple.

The Oakenpin a long laſting Fruit, yields excellent Liquor, and is of the nature of the Weſtbury Apple, tho not in form.

The Nonſuch, is a long laſting Fruit, good at the Table, and well marked for Cyder, and the Redfennel, and Figg-Apple whoſe Tree yields no Bloſſoms as other Apple-Trees; nor Fruit any Core or Kernel, are alſo good Winter Fruit.

There are ſeveral other good Apples that will laſt and keep long as.

The
John-Apple or *Denxans*
Weſtbury.
Winter-Reed
Flower of *Kent*
Parſly
Winter-Cheſnut
Maligar
Apple.

The

Short tart
Winter-Ruſſeting
The *Pelmet* Apple.
Thrift
Winter-Clary

There are many and diverſe kind of Pippins, all of them very good, yet the Gregory-Pippin propagated much about *Mancheſter* in *Lancaſhire*, I eſteem to be one of the beſt for profit and ſervice; it's a fair, large, well reliſhed Fruit, hath little Core in it, and keeps and laſts well till the following *May*; The Trees are quick and large growers, and will proſper well upon courſer Land than other Pippins, and the Trees are great bearers and the Fruit good for any Culinary uſe; And it's an excellent ſort to be propagated, on mean Soils and where better Soil, is not to be had and for the Northern parts.

There alſo are ſeveral ſorts of Renatings, very choice and good Apples, as the Goldin-Renating, the Lincoln-Renating, *&c.*

In Planting Winter Fruit, the beſt courſe is to Plant ſeveral Trees, of ſome few of the beſt kinds, after you have found what ſort proſper beſt in your Soil; for many ſorts will be troubleſome in gathering, and keeping them ſeverally when you have done. Long laſting, keeping, and fair Fruit, and

Apples, will not only adorn your Table, but yield you moſt profit and ſervice.

§. 4. For Cyder Fruit, the Red-ſtreak, Bromsberry-Crab, Golden-Pippin, Gennet-Moil, Weſtbury-Apple, the White and Red Muſt-Apples, the John-Apple, Under-Leaf, Winter-Fillet, Elleots, Stocken-Apple, Bitter-Scale, Claret-Wine-Apple, Arrier-Apple, Richarsd or Grange-Apple, Coling-Apple, Olive-Apple, Fox-Whelp, Pippins and Pearmains mixt, Gilliflower-Apple. *Cyder-fruit*

But above all Cyder Fruit, the Red-ſtreak, is moſt celebrated for it's juice of any Apple the Engliſh Soil affords; It's one ſort of Wildings of *Herefordſhire*, and for the excellent Liquor it yields, is now ſpread into moſt parts of *England*.

There are ſeveral ſorts of them, as the Summer, Winter, Yellow, More-Green, and the Red Redſtreak, which is the Chief and more Red than the other. The Red-ſtreak ſhould be Planted for Cyder rather than any other Fruit, and that for the following Reaſons. 1. Becauſe it yields the beſt of Engliſh Drinks. 2. Becauſe the Fruit is harſh and unpleaſant, and tho kept long, tempts not the Palats of Lewd perſons. 3. The Tree thrives in as mean Land as any other Apple whatſoever, being a ſpontaneous Plant at firſt. 4. It's a conſtant bearer, being a Wilding, enduring (more than the grater part of other Fruit)

Fruit) the ſeverity of ſharp Springs often deſtructive to thoſe that are more tender. 5. The Tree bears in a few years after Grafting, recompencing betimes the induſtry and coſt of the Planter, the delay whereof in other Fruits, hath been a principal obſtacle to the great deſign of Planting. 6. The Tree is low and humble and ſo more of them may be Planted in a like quantity of Ground, than the taller Trees which ſhade the Ground more. 7. The lowneſs of the Tree prevents the ſharpe Winds in the Spring, and the Fruit of them are not ſo apt to be blown off in Autumn. 8. The Fruit exceeds all other Apples in the Kitchin for the time they laſt.

Golden Pippin. But it's obſerved that the Cyder made of the Redſtreak is not in all places alike, altho it be a curious Liquor, excelling moſt Cyders in moſt places, yet in ſome Lands other Apples may make a better Cyder; As the Golden-Pippin being a delicate Apple, yields a juice in many places exceeding the Redſtreak: ſo that if your Land be rich inclining to the Pippin Fruit, the Golden Pippin merits a place in your Plantation, being a very great bearer, and the Fruit one of the beſt for the Table, as well as the Mill, and makes an admirable and reſtaurative Cyder.

If the Redſtreaks are kept till they are mellow, the Cyder at firſt is very luſcious, if Ground early, then is the Cyder more racy.

Bomsbury. Crab.

The Bromsbury Crab is reputed next to the Redſtreak for good Cyder, and altho it be little better than the common Crab, yet if kept on heaps till almoſt Chriſtmas, and then Ground, it yields a brisk, poignant, and very excellent Cyder.

White, and Red Muſt-Apples.

The White and Red Muſt-Apples make a Cyder very good to be drunk about Chriſtmas, next following the ſeaſon of making Cyder. The Trees are of quick and large Growth, good bearers, and 12 or 14 Buſhels or Strikes of them will make a Hogſhead of Cyder.

Gennet Moil.

The Gennet-Moil was once accounted the beſt Cyder Fruit, and ſtill many Gentlemen that are Cyder Maſters prefer it, and preſerve it for their own Drinking.

Winter Queening.

The Winter-Queening is not commonly uſed for Cyder, yet it yields a ſtrong and Vinous Liquor, but ſo dry a Fruit, that 24 Buſhels will go to make one Hogſhead. The Fruit muſt not be Ground till very late in the year.

Pippins and Pearmains.

Pippins and Pearmains mixt are much uſed, and Pippins alone make a ſtrong and wholſome Liquor.

Weſtbury Apple.

In *Hampſhire* near *Peterfield*, there is a Fruit known by the name of the Weſtbury-Apple, ſo call'd from the Village where the old Trees ſtood, that yielded the Grafts to it's Neighbours. It's a fair, Green, and dark coloured Fruit, having on the Sunny ſide of them ſome Red ſtripes, the Rind or Peel exceeding rough, the Fleſh ſpongy and not inclining to Rot, altho rudely handled; if the Fruit hang long enough on the Trees untill they are ripe, which will be with the lateſt.

This Fruit is not to be eaten by reaſon of it's tough, rough and auſtere ſubſtance and Taſt, untill Chriſtmas.

The may be kept untill the Midſummer following, and are to be preferred for any Kitchin uſes. The Trees are great bearers, and thrive in any cold and moiſt Land, and it's probable in barren Land, it being a natural Fruit to this Country, and endures all weathers, and yields an excellent, and plentiful juice. For which property of being hardy, unpallatable whileſt on the Trees (a worſe Apple than it not being to be found) well bearing, durable, and uſefullneſs, the more ingenious Neighbours have encreaſt them. Of which Fruit hath been made Cyder far excelling any Redsſtreak that could be there obtained, and it's probable may exceed any other Cyders, ſo that the Fruit be not Ground untill *December* at ſooneſt; For all hard, durable, rough and ſharp Fruits make the worſt Cyder, if Ground from the Trees, or ſoon after, and the beſt when they have been kept until time hath throughly digeſted their juice by lying on heaps and there ſweating;

John-Apple, Deux-Ans, or Two-year-old Apple.

The John-Apple, or Two-year-old, ſo call'd from it's long laſting, continuing near two years, is an Apple not much unlike the Weſtbury-Apple laſt mentioned; for it agrees with all Soils, and where the Pippin Fruit are ſo ſubject to Canker, that it's labour loſt to Plant them, there this Deux-Ans, or John-Apple flouriſhes even to exceſs, and it's Rind ſo clean, that no other Tree is to be compared to it. The Tree is more apt to aſpire than any other Apple-tree, it's Branches grow very uniform, and therefore may be Planted near one to the other in Rows, but thoſe Rows at a fair diſtance, whereby beautiful Avenues may be made, yielding Fruit as well as ſhade. The Trees are great bearers, and hardy againſt all Winds and Blaſts; The Fruit is ſo hard, ſharp, and unpalatable from the Tree, that it's freed from the danger ſweeter Fruits are ſubject to; they hang long on the Trees before they are ripe, and then being laid up until *December*, or after, and Ground, yield a very delicate Cyder, which will ſoon ferment, therefore muſt be drawn off the Lee in a few days.

This being a common, and in ſome places but a Hedg-Fruit, and yielding but a thin ſowr juice, being Ground from the Tree, hath been of late ſlighted, when in truth there is ſcarce a better Fruit to be Planted, than this John-Apple, or Two-year-old, both for the beauty of the Tree, it's quick growth, it's liking all Grounds, great bearing, enduring all Weathers, long laſting, it's excellency for Kitchin uſes, and preference at the Table, when moſt other Fruits are paſt.

Obſerve that Cyder Fruit may be divided into three Claſſes, Firſt, ſuch as are for making early Cyder, or for preſent Drinking, as the Codling and Summer Fruits, *&c.* Secondly, ſuch that are for making the beſt, rich, oyly, ſpicy, poignant, and high reliſhed Cyder, and alſo long keeping and laſting, ſuch are the Redſtreak, Bromsberry Crab, Golden-Pippin, Weſtbury-Apple, John-Apple, the ſeveral ſorts of Muſts, and Fillets, the Elliot and Stoken-Apple, *&c.* Thirdly, ſuch that are uſeful Fruit for the Table, yet making a very pleaſant and acceptable Cyder, and ſuch are the Pippins and Pearmains, Gilliflower, Marigold-Apple, Golden-Renneting, Harvey-Apple, Queening, *&c.* Generally all hard Apples and Wildings, having a lively, pert, poignant, brisk juice (ſo that they come not too near the degree of ſtark Crabs) make excellent Cyder; but Cyder, made of hard, harſh Fruits, is not ſo ſoon ready for drinking, as that of Summer Fruits, and thoſe more pleaſant: That made of Table Fruit being earlieſt ripe, is ready to drink ſo ſoon as it is well ſettled and cleared; but that of hard Apples, not till Summer following,

lowing, and will continue good for two or three years, or longer, if kept in a cool Cellar, good Veſſells, well ſtopt, and will improve in keeping.

Of Planting ſeveral kinds of Apples,

Some object that ſince one or two kinds of Fruits may be had very good for Cyder, what occaſion is there to Plant of ſo many ſorts?

For Anſwer; They will find it advantageous to have ſeveral ſorts of Fruit for Cyder, for the following conſiderations, 1. One ſort of Fruit-trees may and do bear one year when another fails. 2. Cyder made of ſome kinds will be ready to drink ſooner than others, and thereby you may have it ſucceſſively for your uſe. The Muſt-Cyder may be clear a Month after making; The Gennet-Moil a quarter of a year after; the Redſtreak near Half a year after, though it's much improved by longer keeping. 3. You may make your Cyder with more eaſe, the Fruits you make it of ripening one after another. 4. Tho ſome Fruits yield not ſo good Cyder as others, yet the Trees may be quicker of growth, bear more plentifully, and laſt longer than thoſe that yield better; and the Palates of men being various, ſome like one ſort and ſome another, and ſo all may be pleaſed. 5. Some Fruit-trees agree with the Soil and Clymate better than others, which you'l not be able to know, till you have made tryal of ſeveral.

How to make a new kind of Apple or Pear.

Graft one Fruit on another many times over, every year a different kind, (ſo that you keep to thoſe kinds that will grow together.) As firſt to Graft a Crabtree near the Ground with ſome good kind of Apple Graft, and the next year to Graft that again a handful or two above where the firſt was Grafted, and the next year to Graft that ſecond Graft, and ſo proceed for five or ſix years, by ſetting Graft upon Graft, and this may probably make ſome alteration and commixture in the Fruit of the topmoſt Graft; tho it be true, every Graft keeps it's own nature, yet ſo as it receives ſome ſmall alteration from the Stock, the Sap thus ariſing and paſſing through ſo many kinds of Stocks into the topmoſt, may poſſibly raiſe a new Fruit.

The more Red any Apple hath in it's Rind, the better for Cyder, the paler the worſe; no ſweet Apple that hath a rough Rind is bad for Cyder, if ſuffered eſpecially to digeſt ſome time on heaps, as is hereafter directed, *Chap.* 29. *Sect.* 3.

Mixture of Fruit is of great advantage to your Cyder, the meaneſt Apples mixt make as good Cyder as the beſt alone, except the Redſtreak, and ſome few celebrated Apples for that purpoſe; but always obſerve that the Apples ſo mixt be of equal ripeneſs.

CHAP.

CHAP. XXVIII.

Of Annoyances to Fruit-Trees.

Concerning Moſs or Canker.

§. 1. THe nature of Soil is the chief cauſe of the Moſs and Canker, and therefore without altering the one, you can ſcarce prevent the other; however you may with a hair cloth rub the Moſs off, after rain, or (as ſome ſay) burn it with a bottle of Straw under the Tree: but if you only ſcrape or rub off the Moſs, in few years they'l be as much annoyed therewith as ever; becauſe Moſſineſs is cauſed by over coldneſs of the Ground, as in the Wateriſh and Clay Grounds, and likewiſe by Barrenneſs of the Soil. If the coldneſs proceed from over much moiſture, lay it dryer, by Trenching the Ground; if Clay Grounds, then mix warmer Soils therewith as you are before taught at *Chap.* 7. *Sect:* 10. yet be ſure you take away the preſent Moſs.

All Canker, Filth, and Worms, muſt be picked clean off, and bind ſome Clay well mixt with Hay about the Canker'd place.

If the Tree grow but poorly, which is for the moſt part cauſed by the ill temper of the Soil, open the Ground about the Roots and put in ſome Manure proper to cure it.

The Canker aſſaults generally the beſt ſorts of Fruit-trees, as the Pippin, Pearmain, Harvy-Apple, Golden Rennet, *&c.* of Pears the Wardens of all ſorts, Burgamots. *&c.* And it ſomtimes comes by galling and fretting of Boughs on each other, and ſomtimes by ſetting Trees not ſhallow but too deep, as well as by Barrenneſs of Soil, and ſomtimes it comes by breaking off Boughs (which ſhould be cut off cloſe to the Tree, tho in the Summer) and Cattles nipping off the Buds or pieces of the Tree, or unſeaſonable Pruning.

Raiſing of Stocks from Crab-kernels in the ſame Land and Grafting on, after once removed, and placed where they are to grow and be Grafted, prevents the Canker.

To cure the Canker at preſent, cut it out, if it be upon the body or great Boughs of Trees, and waſh the place with Cow-dung and urine mixt, and then cover the place with Clay mixed with Horſe-dung, and cut off the ſmall Branches that are dead; however ſtop the cauſe by amending the Soil at Roots with proper Manure, as the Dung of Hogs, Pidgeons, Poultry, Horſes, Cows, the ſediments of Pools, Ponds, Currants, Shovelings of yards where Cattle frequent, *&c.* according to the nature of the Soil.

§. 2. Slitting the Bark is an excellent additional help to moſt of the aforſaid evils, and alſo for Bark binding; ſome adviſe that the Bark be cut according to the grain of it, as in Apple-trees, Pear-trees, *&c*, ſtraight down; in Cherries *&c.* round about the Trees; and where the Graft over-thrives the Stock, there ſlit the Stock, but not quite through the Bark, and this ſlitting muſt be done in the Spring about the middle of *February*, or at Candlemas.

Bark bound.

§. 3. You'l often find in the ſame Land ſome kinds of Fruit-trees very ſubject to ſome of the beforementioned evils, and others proſper well; when once you diſcover this (becauſe it's utterly in vain to make Ground and Trees of different Genius agree together) you muſt make it your buſineſs by degrees to change your Trees, till you have left none againſt which your Soil beareth ſuch an implacable hatred, and furniſh it with ſuch as will flouriſh and be fruitful.

Some Trees proſper where others will not.

§. 4. If any of your Trees are galled by rubbing on each other, or by being bound to Stakes, or by Thorns, or otherwiſe, lay ſome Clay upon the gald places and wrap Hay-bands about them, but withall remove the cauſe by Pruning, or otherwiſe.

Bark Gall'd

Dead Tops or bitten Twiggs to be cut off.

§. 5. Bigg Plants that upon there removal have had their Tops cut off, are apt to dye from the place they were cut off at, to the next Sprig or Branch upon them; theſe dead parts, or any piece bit by Cattel, ought to be cut off cloſe to the next good Twig or Shoot, and cover'd with Clay as in Grafting, that the head may be well grown over by ſuch Twig or Shoot, and the wet prevented of getting into the Pith, to the dammage of the Tree.

Hares and Coneys.

§. 6. Hares and Rabbets are very miſchievous to Nurſeries, and young Orchards by peeling off the Bark of the Plants; if your Fence be a Wall, or cloſe Pale, or Water, there's little danger of them, but becauſe ſuch Fences about Orchards are rare, and no other can keep them out, ſome expedient muſt be made uſe of.

Some have uſed Hay Ropes bound about the Tree from the Ground a ſufficient height; but this were endleſs in a Nurſery, it may be done in an Orchard, but there are other ways to be preferr'd before it.

Others therefore dawb the bodies of the Trees over with Tar, which being uſed alone endangers the life of very young Plants, and extreamly hardens the Bark, and otherwiſe hurts them, which evil is prevented by mixing the Tar with any kind of Greaſe, and boiling them on a Fire, ſo as both may incorporate, then with a Bruſh, or little Broom, dawb over the body of the Tree, as high as an Hare or Rabbet can reach, and this is to be done about the tenth of *November*, it will preſerve the Trees for that whole year, with that once doing, it being the Winter time only that they will feed upon the Bark.

Some uſe Greaſe alone, and then it will require to be laid on twice in a Winter.

Some thin ſtuff out of a houſe of Office, or the thick tempered with Water, and bruſht on, once or twice in a Winter hath been often uſed with good ſucceſs.

And if you deſire to take them, ſet Grins of Wire, Snares, or runing Nooſes of Wire (whoſe brittleneſs is allay'd by the heat of Fire) at and in their Muſets, or the holes they come in at, and you may take many, but ſcarce all before you have great miſchiefs done you.

§. 7. If you find Piſmires, or Ants, breed about or near the Roots of any of your Trees, caſt away the Earth they lodge in, and ſupply it's place with ſome ſtiff Clay: If they breed diſtant in ſeveral places, ſome direct to dawb the Tree about with Tar, that their feet may be taken in it, but you heard already that's prejudicial to young Trees; but if they peſter you extreamly, and your Tree be young, you may bind a ſingle liſt, or ſhred of cloth about it, and once a week (when Buds and Bloſſoms are *Piſmires and Ants:*

putting forth, for that is the chief time they prejudice them) dawb the cloth over with Tar. And where you find their breeding places,pour ſcalding Water thereon.

Moles and Water Rats §. 8. Moles are to be killed, eſpecially in Seed plots and Nurſeries: Spring-traps, or Box-traps are beſt to deſtroy them, not eaſily deſcribed, but are now almoſt generally known. There are alſo ſome kinds of Cats that will not leave a Mole either in your Garden or Orchards, and ſome ſay that Water Rats will ſpoil a whole Nurſery getting through Mole holes, and Barking or eating the young Roots, and theſe are ſaid to be frequent where your Nurſery is near a Fiſh-pond.

Suckers. §. 9. From the Stock uſually ſpring many Suckers, which extract the nouriſhment from the Tree, they muſt be taken off dexterouſly from the Root, and may be prevented by Grafting on good Stocks raiſed from Kernels: for Trees Grafted on, or proceeding from Suckers,are always ſubject to this diſeaſe, which the Canker uſualy attends,

Eſts. §. 10. Eſts or (or ſome call them) Askers, are ſaid to be pernicious to Trees; therefore as you find either Moles, Water Rats, or them, deſtroy them.

§. 11. The greateſt prejudice to Fruit is by Blaſtings, Froſts immediately ſucceeding rain, Caterpillars, or black Flies, that eat up Buds, Leaves, and Bloſſoms; therefore when in the Spring you perceive theſe Caterpillars or Flies appear, make fires of ſomthing that will ſmoak, ſo near the Orchard, and in ſuch places that the Wind may carry the ſmoak as much through the Trees as may be. A thing frequently uſed is Hemp ſheaves (as t'is called) being the Stalk of the Hemp, when the Tow is ſeparated from it, and 'its certainly very good, but bad Chaff, wet Straw, or Moldy Hay, or any thing of that nature may ſerve turn, and 'tis ſaid to be good for Froſts alſo, but how, I know not; and you may alſo pluck off thoſe Leaves which have the Cobwebs made upon them, (in which they breed) and tread them under foot, for one of them contains multitudes.

Blaſtings, Froſts, and Caterpillars.

§. 12. Snails are pernicious to Wall-fruit therefore deſtroy as many of them as you can, when they are beſt to be diſcover'd which is early in the morning.

Snails.

§. 13. To preſerve your Wall-fruit as, Apricocks, Peaches, Nectarins, *&c.* from blaſting Winds, and Froſts, it will be neceſſary to cover them in the nights and cold days, by hanging before them Canvas or

Cover Wall-Fruit.

thick Linnen cloths, which you may draw up and let down by Pullies.

Birds. §. 14. Birds, as the Bullfinch, Titmouſe, or Tomtit, *&c.* are affrighted beſt by a dry Hawk perching in the middle of the Tree, or by taking them with Birdlime: Crows will be frighted if you kill one or two of them, and pull it in peices, and ſcatter the pieces about the Trees, they'l not come their again whilſt the Feathers are any thing freſh: but Magpies, Jackdaws, Jay's are not to be frighted from your Cherries, but kill'd as they come with a Gun, and that early in the morning.

Earwiggs. §. 15. Earwigs are deſtroyed by ſetting Ox hoofs, Canes, or any hollow thing near the Roots of the Trees, and among the Boughs upon the ends of ſticks, and they'l Creep in, and lye there, then take off theſe Hoofs quickly, and ſhake them and cruſh them on the Ground with your foot.

Cattle. §. 16. Cattle, whereſoever they come amongſt Trees, are a mighty and miſchievous enemy, if the Boughs be within their reach; for then they'l bite off the ends of all, and thereby with their Teeth, ſo bruiſe the ends of the Boughs and Shoots, that the Tree ſeldoms thrives of many years, if ever, afterwards. Where this misfortune happens to any Tree, the only remedy is to cut off at ſome Sprig or Bud, ſo much as they have had in their mouths, or is bruiſed by their Teeth. And Fence your Orchards well from them, or els, which is the ſureſt way, not to let your Trees begin to ſpread before they be ſix or ſeven foot high, of the Trunk or body, and ſo Prun'd up, that all the Boughs and every part of them be ſo far from the Ground as will be impoſſible for Cattle to reach.

Setting too deep.

§. 17. Altho the ſetting Trees too deep and below the good Soil be no diſeaſe, yet it's the cauſe of many diſeaſes to your Fruit-trees, as Moſs, Barkbound, Canker, *&c.* therefore carefully to be avoided; ſetting ſhallow being attended with no other inconveniences, but that the Trees are ſomtimes blown down, if not Staked the firſt two years.

CHAP.

CHAP. XXIX.

Of Gathering Fruit, *and the beſt way of making Cyder.*

§. 1. IN gathering of Fruit, be careful that the Branches of your Trees be not battered and broken.

§. 2. Such as you deſign to keep any time, ought not to be ſhaked off the Trees, becauſe of bruiſing, but picked off with your hands: Be ſure the Fruit you gather be throughly ripe, which you may know by it's beginning to drop, or by cutting an Apple, and ſeeing the Kernels turn black: Let the Weather be fair and dry when you gather, and no dew upon the Trees; lay up what you thus gather in a cloſe, but a ſweet room, upon a boarded (but not with Deal) Floor, and not on a Clay, or plaiſtred Floor, and lay them up without any green Leaves, or Sticks among them. As you find any in your heaps rot, pick them out, and in Froſts cover them with Straw, or Straw Mats, and alſo hang in ſharp Froſts Blankets before the Windows to keep out the Froſts. Lay every kind by themſelves.

If you have ſome Pears that are choice and laſting, wrap them up in paper, and lay them one by one upon ſhelves, or hang them up by the Stalks, and keep out the Air from them as much as you can.

Gathering of Cyder Fruit and preparing it for the Mill.

§. 3. In gathering Cyder Fruit, you muſt be ſure to let them be well ripe on the Tree, for there is much Cyder ſpoild becauſe the Apples are Ground before they are ripe, and all Fruits yield a different Liquor according to the different degrees of maturity of the ſame Fruit; for when it's moſt ripe it yields a richer, pleaſanter and more laſting drink; but if preſſed before ripe, tho it yields a greater quantity, yet it's but a thin, raw, crude, ſowr, phlegmatick, and unwholeſome drink: Therefore if your Fruit be not ripe all at one time, ſelect ſuch ſorts as are of a like degree of maturity, or if the Wind beat down many, and you are unwilling to ſpoil or loſe them, let them lye dry as long as you can before you grind them, to obtain as great a degree of ripeneſs as they can, and let that Cyder be thoroughly fermented before barrel'd, and the firſt that is ſpent; neither mix ripe with unripe Fruit, nor ought you to permit ſome ſorts of Fruit be too ripe; becauſe it then grows pulpy in Grinding, and will not yield it's Liquor unleſs ſome Water be mixed therewith; your choice Summer Fruits are ſome of them, as alſo the Pippins, and Renatings ſubject to pulpineſs, if full ripe.

Lay ſuch Fruit by themſelves (to be Ground and preſſed for Cyderkin) that are broken; but a ſmall bruiſe does not much injury.

Your Apples being well ripe, let them be gently ſhaken down, and laid out of the Sun and Rain, not abroad but in a heap; upon a ſweet and dry Floor that is boarded (but not with Deals, nor on a plaiſterd Floor) and on dry, Rye, Wheat or Oaten Straw, till they have ſweat out and digeſted their crude and phlegmatick humour, and there let them ſo lye a fortnight; the Redſtreak and harder Apples you may let lye longer, that is, three weaks or a Month; the longer they lye, the leſs Cyder indeed they will yield, but much the better, it being neceſſary to have them as ripe as may be, ſo that too many of them begin not to rot, which rotten ones are to be picked out.

Grind not your Apples immediately from the Tree, ſo ſoon as they are throughly ripe, tho they will then yield the greater quantity of Liquor, but neither pleaſant nor laſting, therefore let them lye on heaps as aforeſaid.

By hoarding only of Windfalls for ſome time, or untill the time it was expected they ſhould have been ripe in, doth very much meliorate the Cyder made of them, which otherwiſe might have been very bad.

For from the due time, place, and manner of hoarding of the Fruit is oftentimes the Cyder very good, which otherwiſe might have been very bad.

Thus when your Fruit is duly ripe, gathered, preſerved or hoarded ſome time, it's ready for the Mill.

When you bring your Apples to the Mill, or juſt befor you fill them up; pick out, or caſt by, all that are Green, unripe, rotten, or otherwiſe naught, and all Stalks Leaves, *&c.* that may injure your Cyder, for it's better to want a ſmall quantity of Liquor than to ſpoil the whole.

Some are of opinion that rottenneſs in the Apple injureth not the Cyder, but that a convenient quantity of rotten Apples mixt with the ſound is a great help to the Fermentation and Clarification of the Cyder; but it's ſuppoſed they mean ſuch Apples only as have been bruiſed in gathering, ſhaking down, or carrying, which will by lying become rotten, and (the skin being whole) be not much the worſe, only the Cyder will retain a ſmack of them; notwithſtanding which, by no means admit them amongſt your Cyder, that you intend for keeping, but rather make Cyder of them for a more early ſpending: for others affirm, that one rotten Apple corrupts a whole Veſſel, which I preſume is intended only of putrid rottenneſs.

Of grinding and Preſſing the Apples.

§. 4. Grind not your Apples too ſmall, for if they are not very ſmall Ground, you'l have but little leſs Cyder (altho the contrary is commonly believed.)

After your Fruit is Ground, let it ſtand 24 or 48 hours, according as your time and conveniency will admit, ſo that it be altogether in good quantities in large Veſſels; by ſtanding thus it not only matures, but acquires colour, commendable in Cyder, and alſo cauſes the leſſer part of the Apple eaſily to part with it's juice in the Preſs; therefore obſerve not the general adviſe to preſs immediatly from the Mill.

You may leave a paſſage open in the bottom of your Fat, wherein you keep your bruiſed Apples, during the time of their being therein, from the grinding to the preſſing; and ſome of the Cyder may ſpontaneouſly deſtill into a receiver placed under it, or you may have a falſe Bottom full of holes, that the greater quanty may be had which may run through ſome Tap or other paſſage into your receiver: Cyder thus obtained far excels that which is forced out by the Preſs; as Live Honey that deſtills of it ſelf from the Combs, is much better than that which remains and is preſſed out afterwards; but this is only uſed to get ſome ſmall quantity of the richeſt Cyder.

In preſſing the Apples, in caſe you intend not to uſe (which is bad husbandry) your Pulp, Muſt, or Murc afterwards for the making of Water Cyder, uſually call'd Purre, or Cyderkin, then it is beſt to preſs it as dry as you can, but incaſe you intend to add Water to your Murc, and to preſs it again, then you need not to preſs it very hard, for your Cyder will then be ſomthing the worſe, and ſo will your Purre, or Cyderkin: for the laſt ſqueezing is the weakeſt, and makes your Cyder the rougher; and if any thing will, that gives it a Woody taſt, unleſs it be prevented in the eaſy Grinding; but this only is obſerved when you intend to have ſome rich Cyder, and Cyderkin for your own uſe, otherwiſe Cyderiſts generally preſs their Apples as hard as they can, altho they intend to make Cyderkin of the Murc.

Barrelling of Cyder.

§. 5. As your Veſſel under the Cyder-preſs fills, then take the Liquor, and pour it through ſome Streyner or hair Sieve (which will detain the Pulp and groſſer pieces of Apples from intermixing in the Vat) into a large Vat, from whence moſt preſcribe to tun it immediately into the Barrels wherein it's to be kept, leſt it's ſpirits ſhould evaporate; but others rather chooſe to caſt a cloth only over the Vat or Tun to preſerve it, and rather waſt and conſume the wild Spirit of the Cyder, in the Tun or Vat, and let it there in ſome ſmall degree purify by ſtanding coverd five or ſix hours in the Vat, before you put it into the Barrel it's to be kept in; then they ſeparate the pure from the impure by leaving as many Feces or Dregs to remain on the bottom of the Vat as poſſible; becauſe Dregs very much incommode your Cyder by making it quickly become acid.

Then Tun up the pureſt (leaving the ſediment at bottom of the Vat) Liquor in a Hogſhead or Barrel, ſeaſoned and ſweet, fill it not up by two Gallons at leaſt, and ſtop it up only with a looſe ſtopper for four or five days, and then ſtop it up cloſe with Clay on the top or Tunhole, and put a Cork or ſome ſtopper in ne Vent-hole, looſly putting in the Peg; but for a weeks time or more, you may once a day draw it forth a little, leſt it break the Veſſel, or force ſome other vent; then ſtop it cloſe up alſo, and ſo let it ſtand till you think it may be ſomthing clear, and then pierce it, to try how it fines; The Summer Fruit after a Month, the Moil after the firſt Froſts, the Redſtreak not till after *January*, other Winter-Fruit Cyder about the ſame time.

If the Cyder be ſo clear that it will not again ferment, and you intend to keep it long in the Barrel; put in clean unground

Wheat, after the proportion of a quart to a Hogſhead, which will preſerve it; and this artificial head is only to be uſed, where an admiſſion of Air may probably be into the Veſſel.

Stopping of Cyder with Clay, if you deſign to keep it long, is not ſo good as a Woodden Plug, turn'd fit to the Bunghole, and covered about with a ſingle brown paper wet, before you wring it into it's place, and then let the Plug be well luted on the top and ſides with Clay temperr'd with Salt.

How to fine or clea Cyder.

§. 6. If your Cyder be not fine at the times aforementioned, try them again about a Month after, and then if it be not fine, rack it off as you would do Wine, ſetting another Veſſel in a convenient place, that through a pipe of Leather, or a Siphon, or a Crane of ſome metal, (as of Latten) or Glaſs, the Liquor may run out of the one into the other, without being expoſed to the Air, which is a moſt material thing to take care of at all times, the ſpirits of Cyder being very apt to evaporate.

Some chuſe rather to fine their Cyder with Water Glew, commonly call'd Iſinglaſs, than by racking it. And the common and beſt way is that amongſt Vintners, *&c.* that have frequent uſe for it; and it is to diſſolve a conſiderable quantity of Iſinglaſs in White Wine, without putting it on the fire, which it will do in about a Months time, and turn to a Jelly, which they keep by them, and it will keep good a Twelvemonth; and when they have occaſion to uſe it, remove the Scum that will be on the top of it, and take what quantity will ſerve their turn out of it, according to the proportion of a quart to a Hogſhead; and this they beat to a froth, and mix it with a quantity of the Liquor it's to be put in, and then pour it into the Veſſel mixing it well together with a Broom, and ſo leaving the work.

Or if your Cyder hath ſtood long, and will not be fine, as oftentimes it ſo happeneth; Then take Iſinglaſs about an Ounce to an Hogſhead, and ſteep it a day or two in about two quarts of Cyder untill the whole be reduced to a Gelly, which by ſtanding warm it will eaſily do, then draw off a bout a Gallon of the Cyder, and mix the Gelly (being cold) throughly with it, and put the whole into the Veſſel of Cyder at the Bung, and with a ſplitted ſtaff, ſtir it well together, and in a day or two it will be fine without any prejudice to your Cyder.

This way of purification will ſerve in all ſorts of Liquors, and is much to be preferred in the juices of Fruits, to that vulgar way of making them to Ferment by the addition of Yeaſt, or Toſts therein dipt, as is uſually preſcribed; that being but an Acid excitation to Fermentation, all things tending to Acidity being (as much as may be) in our operations to be avoided.

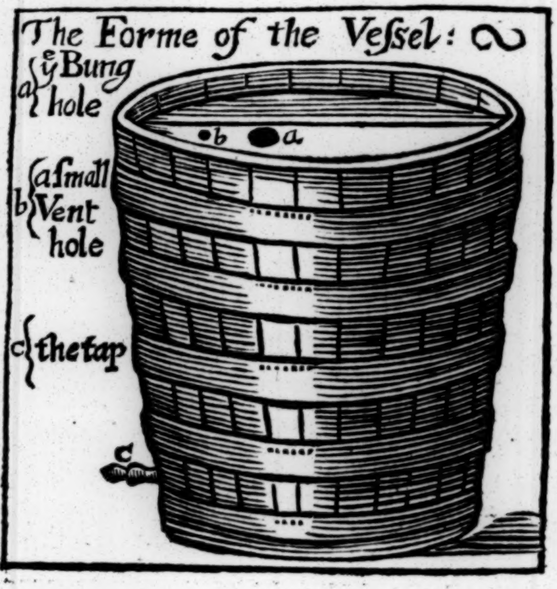
This way alſo is better than the tedious way of Percolation, and racking from Veſſel to Veſſel, which waſts not only the Spirits, but ſubſtance of the Liquor it ſelf, and leaves you but a thin and flat drink, hardly ballancing your trouble.

When your Cyder is very fine, either draw it out of the Veſſel as you drink it, or which is far better, Bottle it: And take notice after it is fine, the ſooner you draw it off the better.

Of Veſſels for Cyder.

§. 7. Altho your Cyder be well made, yet if it be put into ill ſhaped, corrupt, faulty, and unſound Veſſels, it's certainly ſpoil'd. Altho the vulgar round Barrel be moſt uſeful, and neceſſary for Tranſportation from one place to another, yet is the upright Veſſel, whoſe Ribs are ſtreight, and the head about a fourth or fifth part broader than the bottom, and the height equal to the Diameter of the upper part, the beſt form to ſtand in a Cellar. The Bung-hole of about two Inches Diameter, is to be on the top with a Plug of Wood turn'd round exactly to fit into it, near unto which there muſt be a ſmall Vent-hole, that after the Cyder is tunn'd up, and ſtopt at the Bung or Tun-hole, you may give it

Vent at pleaſure; and that when you draw it forth, you may there admit Air into the Veſſel. This is call'd in *Lancaſhire*, a Stand Barrel, becauſe it's made after the form of a Veſſel which the meaner ſort of People keep their drink in, call'd a Stand. This form is preferred; becauſe that moſt Liquors contract a skin, or cream on the top, which helps much their preſervation, and is in other forms broken by the ſinking of the Liquor, but in this is kept whole; which occaſions the freſhneſs of the drink to the laſt. The form hereof is thus.


The Forme of the Veſſel:
a { yͤ Bung hole
b { a ſmall Vent hole
c { the tap
b
a
c

If the Veſſel you put Cyder in be New, ſcald it well with hot Water, wherein ſome of the Muſt, Murc, or Pouz of the Apples have been boil'd.

If your Veſſel be tainted, take five or ſix Stones or more of ſome unſlak'd Lime, and put it in the Veſſel with ſix or ſeven Gallons of Water, and ſtopping it well, Roll it about a while till the Lime be thoroughly ſlak'd.

Wine Cask, if ſweet, are accounted proper to keep Cyder in; but Veſſels out of which ſtrong Beer, or Ale have been lately drawn are to be rejected, unleſs througly ſcalded and ſeaſoned as before, which then will ſerve indifferently well, nothing agreeing worſe with Cyder than Malt. Small Beer Veſſels well ſcalded are not amiſs. White or Rheniſh Wine Veſſels may do well for preſent drinking, or for luſcious Cyder, elſe they are apt to cauſe too great a Fermentation.

The uſing of Cyder Veſſels between the Cyder ſeaſons, with Beer or Ale, not only very much prejudiceth the Cyder, but the uſing of them for Cyder, injureth very much the next Brewing of Ale or Beer. But if you are enforc'd to uſe ſuch, let them be well ſeaſoned and ſcalded as before.

To Sent your Cask as Vintners do for their Wines, do thus, *viz.* Take of Brimſtone four Ounces, of burn'd Allum one

Ounce, and of *Aqua Vitæ* two Ounces, melt theſe together in an Earthen Pan over hot Coals, then dip therein a piece of new Canvaſs, and inſtantly ſprinkle thereon, the powders of Nutmegs, Cloves, Mace, Ginger, Cynnamon, Coriander, and Anniſe Seeds, and by a wire let it down into the Veſſel, and ſet the Canvaſs on fire, and let it burn, and it will fill the Veſſel full of ſmoak, then take it out, and immediatly Tun up your Liquor, which gives it no ill taſt, nor ſavour, and is an excellent preſerver both of the Liquor and your health.

Some take Brimſtone, Orras Roots, and Maſtick, of each a like quantity melted altogether, and long narrow pieces of new Canvaſs drawn through it, being lighted, and put in at the Bunghole, keeps the Cyder long, clear, and good, and gives it a pleaſant taſt.

Cyder by time changes it's greeniſh colour for a bright Yellow, inclining to Redneſs.

Veſſells wherein Malaga, Canary, Sherry, or Metheglin have been kept, will much advance the Colour and taſt of your Cyder, eſpecially if ſome of the Lees of Canary, or Malaga, be left therein, *viz.* about two or three quarts.

If your Veſſel be muſty, Boyl Pepper in Water after the proportion of an Ounce to an Hogſhead; fill your Veſſel therewith ſcalding hot, and ſo let it ſtand two or three days, or inſtead thereof uſe Lime as aforeſaid.

Wheat Bran caſt into the Veſſel after Fermentation, thickens the Coat or Cream of Cyder, and conducts very much to the preſervation thereof.

Choice of Bottles a Corks for Cyder.

§. 8. Thick, double Glaſs Bottles containing about quarts apiece, are preferr'd very much to Stone Bottles; becauſe that Stone Bottles are apt to Leak, and more apt to taint than the other, and are ſo rough in the mouth that they are not eaſily uncork'd, neither are they tranſparent, that you may diſcern when they are foul or clean; it being otherwiſe with Glaſs Bottles, whoſe defects are eaſily diſcern'd, and are of a more compact metal, or ſubſtance, not waſting ſo many Corks. If Glaſs Bottels happen to be muſty, they are eaſily cured, by boyling them in a Veſſel of Water, putting them in whilſt the Water is cold, which prevents the danger of breaking, if you be ſo cautious as not to ſet them down ſuddenly on a cold Floor, but upon Straw, Board, or ſuch like.

If your Glaſs Bottles be foul, you may cleanſe them with hard Sand, or ſome Lead-Shot (each about the bigneſs of an ordinary Peaſe) roll'd, and tumbled up and down with Water, which will alſo in ſome degree take away the muſtineſs from them. Great care is to be had in chooſing good Corks, much good Liquor being abſolutely ſpoiled through the only defect of the Cork; If the Corks are ſteeped in ſcalding Water a while before you uſe them, they will comply better with the mouth of the Bottle, than if forced in dry: alſo the moiſture of the Cork doth advantage it in detaining the Spirits.

Bottling of Cyder.

§. 9. Drawing of Cyder into Bottles, and keeing it in them well ſtopt for ſome time, is a great improver of Cyder. This is done after it is throughly purified, and at any time of the year; if it be bottled early, there needs no addition, it having body and ſpirit enough to retrive in the Bottle what it loſt in the Barrel: But if it have been over-fermented, and thereby become poor, flat and eager, then in the Bottling if you add a ſmall quantity of Loaf Sugar, more or leſs according as it may require, it will give a new life to the Cyder, and probably make it better than ever it was before, eſpecially if it were but a little acid, and not Eager.

When your Cyder is thus Bottled, if it were new at the Bottling, and not abſolutely pure, it is good to let the Bottles ſtand a while uncork't before you ſtop them cloſe, or elſe open the Corks two or three days after, to give the Cyder Air, which will prevent the breaking the Bottles againſt the next turning of the Wind to the South.

The meaner Cyder is more apt to break the Bottles than the richer, being of a more Eager nature, and the ſpirits more apt to fly, having not ſo ſolid a body to detain them as the rich Cyders.

Obſerve that when the Bottle breaks through the Fermentation of the Cyder, to open your Corks, and give vent, and ſtop them up again a while after, leſt you loſe many for want of this caution. Lay your Bottles ſideways, not only for preſerving the Corks moiſt, but for that the Air that remains in the Bottle is on the ſide of the Bottle, where it can neither expire, nor can New be admitted, the Liquor being againſt the Cork, which not ſo eaſily paſſeth through the Cork, as the Air. Some place their Bottles on a Frame, with their mouth downwards for that end, which is not to be ſo well approved of, by reaſon that if there be any the leaſt ſettling in the Bottle, you are ſure to have it the firſt Glaſs.

Placing Bottles on a Frame, as is uſual, or on Shelves, is not ſo good as on the Ground; by reaſon the farther from the Ground they ſtand, the more are they ſubject to the Variation of the Air, which is always more rare in the upper, than lower part of a Cellar, or other Room. Setting Bottles in Sand is much uſed, but without reaſon, becauſe it adds not that coldneſs to the Bottles as is generally expected, being rather of a dry and temperate quality than cold.

The placing of Bottles in Wells, or in Ciſterns of Spring Water running, or very often changed, is queſtionleſs the beſt way to preſerve either Ale, Cyder or any other Vinous Liquor.

A Conſervatory made where a continual recruit of a cool refrigatory Spring Water may conveniently be had, will ſo long preſerve Cyder untill it become to the ſtrength even of Canary it ſelf.

Where you have not conveniency of Water, or are unwilling to be at the expence of making ſuch Conſervatories, there the beſt way is to dig Vaults in your Cellars, under the level of the bottom, or to make Niches in the Walls near the Ground, and in them place your Bottles leaning: for the more they are from the Air, and the more they are encompaſſed with Stone or Earth, the cooler they will continue, and the leſs ſubject to the inconveniences that happen from the mutability of the Ambient Air.

Binding down the Corks of your Bottels in caſe of danger is not ſo much to be commended, as well fitting them in by full Corks; becauſe the Liquor were better fly the Cork, than break the Bottles, which muſt be in caſe the Cork be tyed down, and the Liquor not well qualified.

Reſtoring of Decayed Cyder.

§. 10. Somtimes Cyder that hath been good, by ill managment, or other accident becomes dead, flat, ſower, thick, muddy, or muſty, all which in one ſort or other may be helped.

Deadneſs or flatneſs in Cyder is often occaſioned, from the too free admiſſion of Air into the Veſſel, for want of right ſtopping; which is cured by preſſing ſome Apples, and put up only the new Muſt or Cyder that comes from them on the decayed Cyder, and ſtopping it cloſe, only ſometimes trying it by opening the ſmall vent, that it force not the Veſſel. The ſame may be done in Bottles, by adding a ſpoonful or two of new Muſt or Cyder to each Bottle of dead Cyder, and ſtopping it again. Cyder that is dead or flat, will oftentimes revive again of it ſelf, if cloſe ſtopt, upon the Revolution of the year and approaching Summer.

But Cyder that hath acquired a deadneſs or flatneſs, by being kept in a Beer or Ale Veſſel, is not to be revived, the ſmack of the Beer or Ale being the only cauſe of it, will always predominate,

Honey or Sugar mixt with ſome Spices and added to the Cyder that is flat, revives it much; let the proportion be according as the diſtemper is that requires it.

If Cyder be Acid, as ſomtimes it happens, by reaſon of the Immaturity of the Fruit too nimble an operation, too great a Fermentation in the Veſſel, or too warm a ſituation of your Veſſels wherein it is kept, this ſomtimes becomes pleaſant again, in caſe it's Lee be yet in the Veſſel, as is ſuppoſed by a ſecond operation on it; but in caſe it doth not, if you add about a Gallon of unground Wheat to a Hogſhead of it, it will very much ſweeten it, and make it pleaſant; The ſame effect will two or three Eggs put in whole, or a pound of Figgs ſlit, produce, as is reported; but the ſureſt remedy is Bottling it with a knob of Sugar proportion'd according to the occaſion.

Wheat Boyled till it begin to break, and when cold, added to the Cyder, but not in too great a quantity, and ſtirred into it, helpeth it much.

If your Cyder be Muſty, which happens either from the place the Fruit lay in before Grinding, or from the Veſſels through which the Pulp or Muſt hath paſt, or that the Cyder is contained in, the cure thereof is very difficult, altho in ſome meaſure the ill ſavour of it may be corrected, by Muſtard-Seed ground with ſome of the ſame Cyder.

Thick Cyder is eaſily cured at what Age ſoever, by exciting it to a Fermentation, and purifying it with Iſinglas, as is before directed.

Note that there are ſeveral Cyder Mills lately found out which are better underſtood by ſeeing one, than any deſcription can be given, and they are excellent to grind Apples before you preſs them.

Of making Water Cyder, Purre or Cyderkin.

§. 11. It's obſerved that many ſorts of Apples throughly ripe, will endure ſome addition of Water, without any prejudice to the drink, eſpecially in the Iſland of *Jerſay*, where they frequently give it a daſh; this dilution is only with Apples of a mellow and rich juice, and is neceſſary to help it's clarification, the Cyder it ſelf being of too glutinous a ſubſtance, and they not acquainted with any other way of attenuating it.

If your Apples be pulpy or mellow, they will yield their juice with difficulty, unleſs Water be added, but you may preſs them eaſily at firſt, and extract a ſmall quantity of the richeſt juice, and then add of Water boiled one hour, but cold again, to the remaining Pulp, which after 48 hours ſtanding will yield you ſo rich a Liquor, that ſhall exceed moſt Cyders drawn from newly ripened Fruit.

To ſome ſorts of Fruit that are of themſelves acid, crude, or of a thin juice, dilution is very improper; but if the Water be boil'd and let ſtand till it be cold, it will be the better, that abating much of it's crudity.

Water mixt with the Fruit when Ground, and permitted to ſtand 48 hours, incorporateth abundantly better, than if added in the Veſſel; and if mixt in the Veſſel, better than if added in the Glaſs.

By the additon of Water no other advantage can be expected than the encreaſe of the Liquor, as more ſmall Beer than ſtrong is uſually made of the ſame quantity of Malt. For the ordinary expence in houſe keeping, you may make Cyderkin or Purre after you have Preſſed out your Cyder, by putting the Murc, Muſt, or Pouz up into a large Vat, and add thereto what quantity you think convenient of boyld Water (being firſt cold again:) if about half that quantity as was of the Cyder that was Preſſed from it, it will be good; if as much as the Cyder, then but ſmall: Let this Water ſtand upon it about 48 hours, and then Preſs it well.

That which comes from the Preſs, Tun up immediately, and ſtop it up, and you may drink it in a few days.

This being the moſt part Water, will clarify of it ſelf, and ſupplies the place of ſmall Beer in a Family, and to many much more acceptable.

You may amend it by the addition of the Settling, Sediment, or Lee of your Cyder you laſt purified, by putting it upon the

Pulp before preſſure, or by adding ſome overplus of Cyder, that your other Veſſels will not hold, or by Grinding ſome fallen or refuſe Apples, that were not fit to be added to your Cyder; and preſſing it with this.

This Cyderkin or Purre may be made to keep long, in caſe you boil it after preſſure, with ſuch a proportion of dry Hops (but not Green Hops) as you uſually add to your Beer that you intend to keep for the ſame time, and it will thus be very well preſerved, but then you need not boil your Water before the adding it to your Murc, Muſt, or Pouz.

How to make choice Cyder.

§. 12. If any one ſhall deſire a ſmall quantity of Cyder extraordinary for it's goodneſs, let him take the Liquor that comes firſt from the Muſt without much Preſſing, and diſpoſe of what comes afterwards by it ſelf, or mix it with the juice of another Grinding.

Some have been ſo curious, as to pick off the Trees the ripeſt Apples, and eſpecially thoſe that have had moſt of the Sun, and to make uſe of them by themſelvs for choice and rich Cyder.

How to make Perry

§. 13. Perry is made the very ſame way as Cyder, only obſerve not to let your Pears be very ripe before you Grind them, for if they ſhould be too mellow when

Ground, they are ſo Pulpy, that they will not eaſily part with their juice: and it's adviſed by ſome to mix Crabs at Grinding among the Pears, eſpecially of weakeſt juice, and it's affirm'd they'l very much mend and improve the Perry: The proportion muſt be with diſcretion according as the ſweetneſs of the Pear requires.

Of mixtures with Cyder

§. 14. The beſt addition that can be made to Cyder is that of the Lees of Malaga Sack, or Canary new and ſweet; about a Gallon to a Hogſhead; this is a great improver and purifier of Cyder.

The juice of Raſberries preſerved, or the Wine thereof, gives an excellent tincture to this Liquor, and makes it very pleaſant, if the Cyder be not too new, or too luſcious. When you Bottle Cyder, put into every Bottle, a little Conſerve of Raſberries, and it gives it a curious taſt.

Elder-berries are of great eſteem to ting Cyder with, which may be thus done, Take a Gallon or more of clean pickt and full ripe Elder-berries; put them in a Pot and cover it with a Paper, ſet them in this Pot in an Oven immediatly after you have drawn forth your Houſhold Bread, let them ſtand till the Oven be cold, if they be not enough, heat the Oven again, but not too hot, and ſet them in it again; when taken out, ſtrain out the juice, which will be thin and clear, and Bottle it up with Loaf Sugar for uſe. Two or three ſpoonfuls of this mixed in a quart Bottle of Cyder at the Bottling makes it of a fine Red colour, pleaſant to the Taſt, and endows it with all the Medicinal vertues of the Elder-berry.

In like manner you may uſe Mulberries and Blackberries, which will give cooling tinctures to Cyder.

If your Oven be not very hot, ſet the Elder-berries, *&c.* in with the Bread.

To make Curran Wines, &c.

§. 15. Take Twelve quarts of full ripe and clean pickt Currans, put them into a Stone Mortar, and there bruiſe them with a wooden Peſtel, or els rub them in pieces with your hands, then put them into a well Glazed Earthen Pot, and thereunto put of boiling hot Water that hath been boiled a full hour, Twelve quarts; ſtir them about very well with a wooden Slice in the Water, and let them ſtand 24 hours to infuſe, then drein them through a hair Sieve, and put the Liquor into a ſmall Barrel well ſeaſoned, and ſweet, or into an Earthen Pot cloſe covered, and add to each Gallon of Liquor Two pounds of bruiſed Loaf Sugar, and let the Liquor ſtand in a cool Cellar, ſix or ſeven weeks well ſtopt, only ſometimes, if in a Barrel, give it a little vent, elſe it will break the Veſſel; Then take off the Scum or Cream that is on the top of the

Liquor, and let the Liquor run through a fine Strayner, and Bottle it, putting into every Bottle a little ſpoonful of beaten brown Sugar Candy, and in ſix weeks it will be ready for drinking: Let the Bottles be ſtrong ones, elſe it will break them, only you may prevent that, by opening your Bottles and let them ſtand a whole day uncork't, if it either cauſe the Corks to fly, or break any of your Bottles, or put the Corks looſly in at the firſt, and then knock them in cloſe after ſome time.

Thus you may make excellent and delicate Wines of Currans, Black-berries, Rasberries, Goosberries, only let not your Goosberries be too ripe, but all the reſt full ripe.

If you deſire the Wine to be ſtronger than this, put but a Pint and half, or a Pint of boyling Water to each Quart of the Fruit, and you may make a ſecond and ſmaller ſort of Wine, of the Muſt, Murc or Pouz of your Fruit.

Another way of making the ſaid Wines of Currans &c. but not ſo good as the former except for Cherrie-Wine.

§. 16. For every pound of clean pick't, and ripe Fruit ſtampt, and the Liquor or juice preſt out, take a Quart of Spring Water, and a quarter of a pound of fine White Sugar, boil the Water and Sugar, Scum it and put in the juice of your Fruit, then let it boil up again, take it off the Fire, run it through a hair Sieve, and when it's throughly cold, put it in a ſtean Pot or Veſſel cloſe covered, and placed 15 days in a cool Cellar, then draw it out into Bottles, put into each Bottle the quantity of a Nutmeg of Loaf Sugar, it will not be fit to drink under a quarter of a years time, and will keep good a year.

Cherry Wine. According to this laſt direction, you may alſo make Cherry Wine, or to make it ſtronger uſe no more Water than juice of the Cherries. When you bottle any of theſe Wines you may put the Corks looſely in for ſome time before you ſtop them cloſe.

Cherry Brandy. §. 17. Cherry Brandy is uſually made with Black Cherries, by filling a Bottle half full of Cherries, and putting in the Brandy till the Bottle is near full; ſhake it ſomtimes, within a Month it will be ready to drink, but keep it in a cool Cellar.

Goosberry Brandy. §. 18. If you put the like quantity of Goosberries inſtead of Cherries, it will make the Brandy very delicious.

How to make Metheglin or Hydromel. §. 19. Take Live Honey (which is that Honey that naturally runs from the Combs without preſſure, by laying the Combs on a Sieve, and placing a Veſſel under it to receive the Honey) and add what quantity of Honey you pleaſe, to clear Spring Water, (about the proportion of a Pint of Honey to a quart of Water) then boil this Liquor in a Braſs, or rather Copper Veſſel, for about an hour or more, then let it cool, the next morning you may Barrel it up, adding to the proportion of 15 Gallons, an Ounce of Ginger, half an Ounce of Cynnamon, of Cloves and Mace of each an Ounce, all groſly beaten, for if you beat them fine, they will always float in your Metheglin, and make it foul, and if you put them in whilſt it is hot, the Spices will loſe their Spirits: You may alſo, if you pleaſe, add a ſpoonful of Yeſt, or Ale Barm, at the Bung-hole to encreaſe it's Fermentation, but let it not ſtand too cold at the firſt, that being a principal impediment to it's Fermentation; As ſoon as it hath done working, ſtop it cloſe, and let it ſtand for a Month; then draw it into Bottles, which ſet it in a cool Cellar, or Refrigeratory of Spring Water, and it will become a moſt pleaſant Vinous Drink, dayly loſing it's luſcious taſt; and the longer it is kept the better it will be.

You may make it more or leſs ſtrong as you pleaſe, by adding of more Honey, or more Water.

By long Boyling it is made more pleaſant, and more durable.

All Green Herbs are apt to make Metheglin flat or dead, therefore uſe your Herbs after they are well dryed in the ſhade: Cloves are apt to make it high coloured; and the Scumming of it in the boiling

ing is not advantagious but injurious to it, becauſe the Scum being of the nature of Yeſt or Barm, helps to ferment and purify.

How to make ſmall Meath.

§. 20. Take 24 Quarts of clear Spring Water, that hath been boyled with Liquoriſh, Roſemary, Bays, Fennel and Purſly Roots, of each half a handful, till it taſt ſtrong of them, which will be in half an hours boyling; put the Water through a Sieve, and add full eight Pints of Honey to it; When it is diſſolved ſet it over the Fire in a Braſs, or rather Copper Pan; let it boyl a quarter of an hour after it would boyl all over, in which time continue to Scum it clean; put it then into Earthen Pans, and when it is cold as Wort is when it is put together, pour off the clear into a Pale, and put to it about one Pint and half of Ale Barm, or Yeſt, which muſt be poured in by degrees as it works; when it hath ſtood all together a day and a night, Tun it up together in an Earthen Pot that hath a Spigot, and hang in it a bag with Nutmeg, Ginger, and Cinnamon, quartered or ſliced; if the weather be cold, cover it; it muſt ſtand till the Barm begins to ſhrink from the ſides, which will be in eight or ten days; then Bottle it, and let it ſtand all night, with Corks put looſly in; the next day give them Air, and knock them down; if the Weather be hot, put them in the Cellar, otherwiſe in ſome warmer place to ripen, it will be ready to drink in a Month.

You may this way make Metheglin by adding a grater quantity of Honey; and the ſame is highly commended.

Of Birch Wine.

§. 21. You may eaſily extract great quantities of the juice of the Birch-tree by cutting off the ends of the Boughs of the Tree, and hanging Bottles thereon, leaving the ends of the Boughs fit to go into the Bottles mouths, and the Liquor will therein diſtil. Or with more eaſe cut a Swan or Gooſe quill at one end, in the ſhape of an Apple ſcoop or Apple Scraper, and with a Gymblet make a hole in the body of the Birch-tree, and put in this Quill with the mouth upwards, and ſet a Pot under the other end of the Quill, and great quantities of the juice or Liquor will fall thorough the Quill into the Pot; but that Liquor which comes from the Branches, being better and longer digeſted, is better than that which comes from the Trunk of the Tree. And this is only to be done from the end of *February*, to the end of *March*, of this Liquor or juice of the Birch is made a very wholſome and medicinable Wine in this manner, *viz.*

To every Gallon of the Liquor add a pound of refined Sugar, and boil it about a quarter or half an hour, then ſet it to cool, and add a very little Yeaſt to it, and it will Ferment and thereby purge it ſelf from that little droſs, the Liquor and Sugar can yield; then put it in a Barrel, and add thereto a ſmall proportion of Cynnamon and Mace bruiſed, about half an Ounce of both to ten Gallons; then ſtop it very cloſe, and about a Month after Bottle it, and in a few days you'l have a moſt delicate Wine of a Flavour like unto Rheniſh: It's Spirits are ſo Volatile that they are apt to break the Bottles, unleſs placed in a Refrigeratory, and when poured out, it gives a White head in the Glaſs. This Liquor is not of long duration unleſs preſerved very cool. Inſtead of every pound of Sugar, if you add a quart of Live Honey and boil it as before, and adding Spice, and Fermenting it as you ſhould do Metheglin, it makes an admired Drink, both pleaſant and medicinable.

Ale Brewed of the juice or Sap of the Birch-tree is eſteemed very wholeſome.

Birch Wine, as alſo Birch Ale, are excellent remedies againſt the Stone; *Van Helmont* being the firſt that diſcoved it's vertue, mightily commends it.

If when you make your Metheglin you uſe the juice of the Birch inſtead of Water, and when Barrell'd, you for every Gallon of the Liquor hang four Ounces of Daucus Seed, ſomething bruiſed in a bag in the Liquor,

quor, it's ſaid to be very good for the Stone.

Profits of Planting.

§. 22. The advantage in Planting Trees may thus eaſily be computed, *viz.* An Acre of Ground (accounting eight yards to the Pole or Perch) will take about 160 Trees, which may be ſet at diſtance enough; which Trees if bought, and not raiſed by your ſelf, may be had for about ſix pounds, when ſet and ſtaked; the yearly profit of the herbage or Tillage of this Acre of Ground for the firſt ſeven years after Planting, may well be employed in digging about the Roots of the Trees, carrying off convenient and proper Soil, or Compoſt for them, mantaining the Fences, paying duties, *&c.* At the ſeven years end, theſe 160 Trees, one Tree with another will yield a Buſhel (accounting 32 Quarts to the Buſhel) of Apples each Tree, altho ſome of them may have periſhed, and others as yet but young raiſed in their places, yet may ſome of theſe Trees at ſeven years growth, bear two or three Buſhels, and ſome a Buſhel and an half, which may in the whole amount to one hundred and ſixty Buſhels, which at ſix pence *per* Buſhel is four Pound; the Herbage then will be worth at leaſt thirty Shillings *per Annum*, altho the Ground were worth leſs before it was Planted; the eighth or ninth year your Trees may one with another, and one year with another yield you at leaſt two or three Buſhels on a Tree, and ſometimes more, which at ſo low a rate, your ſix Pound firſt expended, and the forbearance of the profit of your Land, and intereſt of your Money for ſeven years, will bring you at leaſt eight Pounds *per Annum*, the Herbage being ſtill allowed, for the maintenance of your Plantation; but if a good Fruit year happen, and your 160 Trees yield you ſix or ſeven hundred Buſhels, and thoſe worth twelve pence, or eight pence the Buſhel, it will in one year more then retaliate all your paſt labour, charge and loſs, and your ſelf will be furniſhed with an excellent Orchard, very ſerviceable to your Family both in baking, and making ſtrong, and ſmall Cyder for your Table, and thereby ſaving great quantities of Malt.

A Buſhel and half, or 48 Quarts of Apples will make 18, 20, 22, or ſomtimes 24. Quarts of Cyder, according to the goodneſs of your Fruit for that purpoſe, and there will alſo be ſo much Cyderkin made of the Pouz, or Murc, as will be better worth than the charge of Grinding and Preſſing, *&c.* Twenty Buſhels commonly make a Hogſhead of Cyder.

They that are deſirous to underſtand the ordering of a Garden, either for the Kitchin, or Flowers, let them peruſe a Book call'd, The *Engliſh Gardiner*, writ by *Leo-*

nard Meagar, and therein they'l find both ample and true inſtructions.

Altho there is no Liquor, Drink, or Diet alike pleaſant to all; ſome preferring Dull Coffee before any other, ſome ſtale Beer, others, fat Ale, or Mum; one Claret, another Sack; yet our Engliſh know no other Drink ſo generally palatable as Cyder, becauſe it may be made ſuit with any humourous Drinker. It's made Luſcious by the addition of a good quantity of ſweet Apples at the Grinding; pleaſant, being made with Pippins or Gennet-Moyls; Racy, Poignant, Oyly, Spicy, and Rich, with the Redſtreak, and ſeveral other ſorts of Fruits, even as the Operator pleaſes. And it ſatisfies thirſt, if not too ſtale, more than any other uſual Drink whatſoever; and in ſuch years as Corn is dear, the beſt Cyder may be made at a far eaſier rate than ordinary Ale. The conſiderations whereof adds much to the exhilerating virtue of this Drink.

Next unto Cyder, Perry claims the precedency, eſpecially if made of the beſt juicy Pears celebrated for that purpoſe, as the Bosbery-Pear, Bareland-Pear, the Red and White Horſe-Pear, or many ſorts of wild and choak Pears, but above all the Turgovian-Pear.

Wines or Drinks made of Currans, Goosberries, Rasberries, Blackberries, Cherries, or Plums, prepared and made as is before taught, may be more acceptable to our Palats, healthy, pleaſant, and profitable than thoſe exotick Wines many are ſo fond of and Dote on.

And in this very year 1682, I know Wine made of the White Dutch Curran, according to the direction of the 15 *Sect.* of this *Chap.* (only there was but a Pint of Water added to each Quart of the Fruit) far ſuperiour to the beſt French White Whine could be bought in our Country, if ſeveral judicious Palats were not miſtaken.

How to Liquor Boots or Shoos to walk in the Fields and Orchards to keep out wet.

℞ Of *Diapalmæ*, and of *Deminio Compoſit.* of each two Ounces, and of Hogsgreaſe rendred (no Salt being in it) half a Pound, melt them together, keeping continual ſtirring, and Liquor the Leather and Soles therewith, beſore the Boots or Shoos are ſhaped out, and afterwards when occaſion is, the Liquor muſt be warm when uſed.

An Abridgment of the Statutes of 43, *Eliz.* Cap. 7. and 15, *Car.* 2. Cap. 2.

Laws againſt breaking Orchards and ſtealing Trees and Wood, &c.

IF any ſhall be Convicted by his own Confeſſion, or by the Teſtimony of one Witneſs upon Oath, before one Juſtice of Peace, or Head Officer, to have unlawfully cut and taken away, any Grain growing, robbed any Orchard or Garden, digged up or taken away any Fruit Trees, broken any Hedges, Pales, or other Fences, cut or ſpoiled any Woods or under Woods, ſtanding and growing, or the like, or to have been acceſſary thereunto, ſhall for the firſt offence pay unto the party grieved, ſuch damages and within ſuch time, as by the ſaid Juſtice, or head Officer ſhall be appointed: And in caſe the pary offending ſhall not by the ſaid Juſtice or Officer, be thought able to diſcharge the ſade damages, or ſhall not diſcharge them according to the ſaid Order, then ſhall *the ſaid Offender be by them, or either of them (reſpectivly) committed to the Conſtable, or other Officer of the place, where the Offence was committed, or the party apprehended, to be Whipped, and for every other offence committed afterwards, and proved as aforeſaid, the party offending ſhall receive the like puniſhment of Whipping.*

The Conſtable, or other inferior Officer that herein refuſeth or neglecteth to do his duty, ſhall by any ſuch Juſtice of Peace or Head Officer be committed to Priſon without Bail, till he Whip, or cauſe to be Whipped the party offending, as is above limited.

No Juſtice of Peace ſhall execute this Statute for Offences done to himſelf, unleſs he be Aſſociated with one or more Juſtices of Peace, whom the Offence doth not concern. Vid. *the Statute of* 43. Eliz. Cap. 7. *at large.*

Statute, 15. Car. 2. Cap. 2. *reciting the Statute of* 43. Eliz. Cap. 7. *doth not ſufficiently prevent, nor puniſh the Cutting and ſpoiling of Woods, Enacts, that ever Conſtable, Headborough,*

borough, and other perſon in every County, City, or other place, where they ſhall be Officers or Inhabitants, ſhall and may Apprehend, or cauſe to be Apprehended, every perſon they ſhall ſuſpect having, carrying, or conveying, any burden or Bundle of Wood, Poles, young Trees, Bark, Baſt of Trees, Gates, Stiles, Poſts, Pales, Rails, or Hedg-wood, Broom, or Furze.

And by Warrant under the hand and Seal of any one Juſtice of the Peace, directed to any Officer, ſuch Officer may enter into, and ſearch the Houſes, Yards, Gardens, and other places belonging to the Houſe or Houſes, of every perſon or perſons they ſhall ſuſpect to have any kind of ſuch Wood, or other the ſaid Trees, &c. and where they ſhall find any ſuch, to apprehend evey perſon ſuſpected for Cutting and taking the ſame, and as well thoſe apprehended carrying any kind of Wood or other Trees and premiſſes; as thoſe in whoſe Houſes or other places belonging to them, any of the ſame ſhall be found to carry before any one Juſtice of the Peace of the ſame County: and ſuch perſons ſuſpected do not give a good accompt how they came by the *ſame by the conſent of the owner, ſuch as ſhall ſatisfy the ſaid Juſtice, or within ſome convenient time to be ſet by the ſaid Juſtice, produce the party of whom they bought the ſaid Wood, or ſome credible witneſs upon* Oath, *to prove ſuch ſale, which* Oath *the ſaid Juſtice may Adminſter, then ſuch perſons ſo ſuſpected, and not giving ſuch good accompt, nor producing ſuch witneſs, ſhall be adjudged as convicted, for cutting and ſpoiling of Woods, Underwoods, Poles, Trees,Gates, Stiles, Poſts, Pales, Rails, Hedg-wood, Broom, or Furze, within the meaning of the Statute of Queen* Elizabeth, *and lyable to the Puniſhments therein, and of this Act appointed.*

Every perſon ſo Convicted, ſhall for the firſt offence, give the owner ſatisfaction for his damages, within ſuch time as the Juſtice ſhall appoint, and over and above, pay down to the Overſeers of the Poor of the Pariſh where ſuch offence is, ſuch ſumm of Money (not exceeding ten ſhillings) as the Juſtice ſhall think meet, in defalt of either of which payments, the ſaid Juſtice may commit ſuch offender *to the Houſe of Correction for ſuch time (not exceeding one Month) as he ſhall think fit, or to be Whipt by the Conſtable or other Officer, as in his judgment ſhall ſeem expedient.*

And If ſuch perſon ſhall again commit the ſaid offence, and be thereof Convicted as before, that then the perſons offending the ſecond time, and Convicted, ſhall be ſent to the Houſe of Correction for one Month, and there be kept to hard labour, and for the third offence, Convicted as before, ſhall be judged and deemed as incorrigible Rogues.

Provided alſo whoever ſhall buy any Burdens, or any the premiſſes mentioned in this Bill ſuſpected to be Stolen, or unlawfully come by, the Juſtices, Mayors, or chief Officers, or any one of them within their reſpective juriſdictions, upon complaint may examine the matter upon Oath, and if they find the ſame was bought of any ſuſpected to have Stolen, or unlawfully come by the ſame, then any one of the ſaid Juſtices or chief Officers, ſhall and may award the party that bought the ſame, to pay treble the value

value thereof to the party from whom the ſame was Stolen or unlawfully taken, and in default of preſent payment, to Iſſue out their reſpective Warrants to levy the ſame by diſtreſs, and Sale of the Offenders Goods, rendring the overplus to the party, and in default of ſuch diſtreſs to commit the party to the Goal, at his own charge, there to remain one Month without Bail.

Provided no perſon be queſtioned for any offence within this Act, unleſs within ſix weekes after the Offence committed.

CHAP. XXX.

Brief Monthly Memorials for the Planter.

JANVARY.

DIg, Trench, and Dung Ground, and make it ready for the Spring; prepare Soil, dig Borders; uncover as yet the Roots of old unthriving, or over-haſty Blooming Trees; Plant Quickſets, tranſplant Fruit-trees, if not finiſhed; ſet Vines, and Prune the old; Prune eſpecially the Branches of old Planted Fruit-trees, about the decreaſe of the Moon; but Prune not the newly Planted till the Sap begin to ſtir. Cleanſe Trees from Moſs, the Weather moiſt. Nail and trim the Wall-fruit-trees, and Eſpalirs. Gather towards the end of the Month Cyons for Grafts of Cherries, Plums, and Pears, before they begin to ſprout and any ſpeck of White appears on the Buds, if the Weather be open. In over-wet or hard Weather cleanſe, mend, ſharpen and prepare all your Grafting and Garden Tools: Deſtroy Vermin in your

Seminary of Kernels and Stones for Stocks.

FEBRUARY.

Continue yet to Prune Fruit-trees, and bind, Plaiſh, Nail, and dreſs the moſt delicate Wall-fruit, if not finiſhed before, but be exceeding careful of injuring the ſwelling Buds, and Bearers; cut and lay Quick-ſets, trim up the Hedges and eſpaliers; Plant Vines as yet and Hops; ſet Kernels, and Stones of all ſorts. Sow and ſet Beans, Peas, Radiſh, Parſnips, Carrots, Onions, Garlick. Now is the ſeaſon for circumpoſition by Tubs or Baſkets of Earth, and laying of Branches to take Root; rub Moſs from your Trees after a ſoaking Rain, and ſcrape and cleanſe them of Cankers, draining away the Wet (if need require) from the too much moiſtened Roots. Mold and Earth up the Roots of ſuch Fruit-trees as were bared. Pull off the Webs of Caterpillars from the Tops and Twigs of Trees, and burn them. Gather Worms in the Evening after Rain. Plant Cabbage Plants, Colliflowers, Parſly, Spinage and other hardy Pot-herbs. Graft Cherries, Plums, and Pears, and towards the end of the Month, Apples if a forward Spring. Get Cyons for Apple-grafts. You may yet tranſplant Trees, tho it had been better done in *October*, or *November*. Slit almoſt through the Bark, your Bark-bound and Canker'd Trees. Plant Potatos, but not amongſt your Fruit-trees.

MARCH.

DUnging is yet ſeaſonable, and you may tranſplant what Trees are yet left, tho it be dangerous and full late enough, unleſs in very backward, or moiſt places. You may Graft' Apples all this Month, and in the begining of it Plums, Cherries, and Pears; you may as yet cut Quickſets, and cover ſuch Tree-roots as were bared in Autumn. Prune laſt years Grafts, and cut off the heads of your Budded Stocks. Now is beſt time for raiſing on Hot Beds, Melons, Cucumbers, Gourds. Slip and ſet Sage, Roſemary, Lavender, Thyme, *&c.* Sow in the beginning Endive, Succory, Leeks, Radiſh, Beets, Chard-beet, Scorzonera, Parſnips, Skerrets, Parſley, Sorrel, Bugloſs, Borrage, Chervil, Sellery, Smallage, Aliſanders, *&c.* Sow alſo Lettuce, Onions, Garlick, Orach, Purſlane, Turneps, to have early, Beans, and Peas towards the full Moon, Carrots, Cabbages, Creſſes, Fennel, Majoran, Dill, Scurvy-graſs. Set Cabbage-plants, and Colliflowers. Tranſplant any ſort of Pot or Medicinal Herbs; Mid-march dreſs up and ſtring your Strawberry Beds. Uncover Aſparagus, and Tranſplant Aſparagus-roots to make new Beds. This is the prime

Month for Botling Cyder, and if you put in about half a ſpoonful of Spirit of Clary, it will make the Liquor ſo perfectly to reſemble the very beſt Canary, that few good and exerciſed Palats will be able to diſtinguiſh it. Set Potatos, but not amongſt your Fruit-trees; Sets them thus, Plow or Dig Ground into Buts or Borders about ſix Foot broad, but leave two Foot intervals; then Harrow or Rake it well, then ſpread Rotten Dung thereon, on the top whereof lay Potato Sets, then Shovel up the Earth in the intervals, and cover the Sets two or three Inches thick. Moſt ſorts of Sallet, Pot, and ſweet Herbs may be ſown from the firſt of *March*, to the end of *July*, and moſt ſorts of ſetting Herbs may be removed, ſlipt and parted the ſame time.

APRIL.

PLant Artichock Slips, ſet great Beans, and ſow Carrots; if the Spring be not forward you may yet Graft Apples in the beginning of the Month. Gather Worms, Snails, after evening ſhowers and after all the Summer Rains: and deſtroy Caterpillare Webs, and ſmoak Caterpillars and black Flies from your Trees. Mow Carpet Walks. Weed your Currans, Gooſberries, *&c.* From the beginning to the middle ſet Potatos, but not amongſt Fruit-trees. You may yet ſlip Lavender, Thyme, Roſemary, *&c.* Towards the middle begin to Plant forth your Melons, Cucumbers and ſo to the later end, your Ridges well prepared. Sow ſweet Majoran, Hyſſop, Baſil, Winter Savory, Scurvy-graſs, Lettuce, Purſlane, Coliflowers, Radiſh, Thyme, and all fine and tender Seeds. Clip Shrubs after ſhowers.

MAY.

COntinue your Weeding before they run to Seeds, and with Sheers top your Currans, and Goosberries. Sow ſweet Majoran, Baſil, Thyme, hot and Aromatick Herbs and Plants which are moſt tender. Sow Purſlane to have young, Lettuce, large ſided Cabbage, Painted Beans. Look to your Melons, and towards the end of the Month forbear any longer to cover them.

JUNE.

SOw Lettuce, Chervil, Radiſh, *&c.* to have young and tender Salleting, Spinage. Cleanſe Vines of exuberant Branches cropping not cutting, and ſtopping the joint immediately before they Bloſſom, and ſome of the under Branches that bear no Fruit, eſpecially in young Vineyards when they firſt begin to bear, and thence forwards. Gather Herbs in the full to keep dry, they keep and retain their Virtue and ſweet ſmell better dry'd in the Sun, than ſhade, whatever ſome pretend.

About a fortnight before and as much after Midſummer are the chief and beſt times to Inoculate Peaches, Apricocks, Cherries, Plums, Pears, Nectarins, and Apples. Water lately Planted Trees, and put moiſt and half rotten Fearn, Weeds, and Vegatables about the foot of their Stems. Continue Weeding, and gather Snails after Rain. Unbind thoſe Grafts you bound. About 14 days before or after Midſummer, ſow Turneps upon Ground prepared as for Barley; after Midſummer makes the better Turnep. Three Pints of Seed will ſow an Acre, accounting ſeven yards to the Pole; your Seed is to be mixed with dry Sand thus, Three ſpoonfuls of Seed with a peck of Sand, then ſow; if immediately after ſowing a ſhower of Rain and hot Sun-gleams happen, it's ſpoil'd.

JULY.

SOw Lettuce, Radiſh, Spinage, *&c.* for late and tender Salletting. Sow later Peas to be ripe ſix weeks after Michaelmas. Water young Planted Trees and Layers. Prune now Apricocks, and Peaches, ſaving as many of the young likelieſt Shoots as are well placed, for the now bearers commonly periſh the new ones ſucceeding: Cut cloſe and even. Let ſuch Pot-herbs run to Seed as you would ſave. About the eighth Inoculate ſuch Fruits as in *June* are directed, and ſow Turneps alſo then and towards the full Moon. Towards the later end viſit your Vineyards again, and ſtop the exuberant Shoots above the Fruit, but ſo as not to expoſe them to the Sun. Search under Wall-tree-leaves for Snails, they ſtick commonly about the Fruit, pull not off what is bitten, for then the'l begin afreſh. Now (in the drieſt ſeaſon) with Brine, Pot Aſhes and Water, or a decoction of Tobacco refuſe, Water your Gravel Walks, *&c.* to deſtroy both Worms, and Weeds, of which it will cure them for ſome years. Continue Weeding; gather Currans to make Wine of. Make ready your Cyder Mill and Preſs, *&c.*

AUGUST.

INoculate now early if you began not before. Prune off yet ſuperfluous Branches and Shoots of this ſecond Spring, but leave ſome Leaves to ſcreen the Fruit from the Sun, furniſhing and nailing what you will ſpare to cover the defects of your Walls. Pull up the Suckers. Sow Radiſhes, tender Cabbages, Colleflowers for Winter Plants, Corn-ſallet, Marigold, Lettuce, Carrots, Parſnips, Turnips, Spinage, Onions, alſo curl'd Endive, Angelica, Scurvy-graſs, *&c.* pull up ripe Onions and Garlick, *&c.* Towards the end ſow Purſlan, Chard, Beet, Chervil, *&c.* Tranſplant ſuch Lettuce as you'l have abide all Winter. Gather your Olitory Seeds, and clip and cut all ſuch Herbs and Plants within one handful of the Ground. Before the full, unbind and releaſe the Buds you Inoculated. Gather your Windfal Apples from day to day, if the Weather be dry. Make Summer Perry and Cyder.

SEPTEMBER.

GAther now (if ripe) your Winterfruit as Plums, Pears, Apples, *&c.* to prevent their falling by great Winds, alſo in dry Weather gather Wind-falls from day to day. Sow Lettuce, Radiſh, Spinage, Parſnips, Skerrets, Colle-flowers, Cabbages, Onions, Scurvy-graſs, Aniſeeds, and Winter Herbs. Now you may Tranſplant moſt ſort of Eſculent and Phyſical Plants, Artichocks, and Aſparagus Roots. Sow Winter Herbs and Roots, and Plant Strawberries out of the Woods: Towards the end Earth up your Winter Plants, and Sallet Herbs, and Plant forth your Colle-flowers, and Cabbages ſown in *Auguſt*. With a pair of Sheers top Currans, and Goosberries, dig about, Manure and Mold up their Roots, towards the end. Make Perry and Cyder.

OCTOBER.

TRench, Dig, and Manure Ground for Orchading, and Kitchin Garden to lye for a Winter Mellowing. Plant and ſet Fruit-Trees of all ſorts, Standard, Mural, or Shrubs, which loſe their Leaf, and that as ſoon as it falls. Chooſe no Tree for the Wall above two years Grafting at moſt. Now is the time for laying bare old unthriving, or over-haſty Blooming Trees. The Moon decreaſing, gather the remaining Winter-fruit in dry Weather, lay them up clean, leſt they taint; Plant and Plaſh Quickſets. Sow all Stoney and hard Kernels and Seeds, ſuch as Cherry, Pear, Plum, Peach, Almond-ſtones, *&c.* Alſo all ſorts of Nuts, Haws, Aſhen, Sycamore, and Mapple-keys; Acorns, Beech-maſt, Apple, Pear, and Crab-Kernel for Stocks; or you may defer it till towards the later end of the next Month. Keep your Stones and Nuts in Sand till ſet. Yet ſow Lettuce. Make Winter Cyder, and Perry. Sow as in *September.* Sweep and cleanſe your Walks of Autumnal fallen Leaves.

NOVEMBER.

Carry Compoſt out of your Melon Ground, or turn and mingle it with the Earth, and lay it in Ridges ready for the Spring; Trench and fit Ground for

Artichocks, Mold them up, and cover them in the beginning of Froſts with Horſe-dung. Continue ſetting and Tranſplanting Trees; loſe no time, hard Froſts come on a pace; yet you may lay bare old Trees. Plant young Trees, Standard, or Mural. Furniſh your Nurſery with all ſorts of Stocks to Graft in. Sow and ſet early Beans, and Peas till Mid-*March.* Now lay up in your Cellars for Seed to be Tranſplanted at Spring, Carrots, Parſnips, Cabages, Colliflowers, *&c.* In a dry day gather your laſt Orchard Fruits. Take up your Potatos for Winter ſpending, there will enough remain for Stocks, tho never ſo exactly gatherd, ſave the ſmall ones for Sets. Cut off the tops of Aſparagus and cover them with long Dung, or make Beds to Plant in Spring. Set yet all ſorts of Kernels and Stones to raiſe Stocks for Nurſery. In Froſts Cover the Windows of your Fruit Room, and the Fruits, with Mats of Straw, *&c.*

Now order Turneps for Seed thus, *viz.* about the Tenth get up ſome of your largeſt and beſt Turneps, (20, will yield about a Quart of Seed) but waſh them not, then cut off the top of the Buſh or Stalk, leaving five or ſix Inches to grow to the Turnep, lay theſe about 14 days in a cool Room, then prepare a convenient Plot of Ground by Diging and Trenching good ſtore of rotten Muck, then ſet Turneps half a yard diſtant from each other, and Mould up the Earth three Inches high on the Stalk about each; in *April*, place ſmall Haſel Rails about them to keep them up, and thy'l be Seed in *June*, if you can preſerve them from Birds, which is done by placing a live Catling tied near it daily fed with Milk, and the old ones reſorting to it. If you ſet not theſe Turneps till *January*, the Seed produces a Watery, but larger Turnep. Take up Carrots, Parſnips, *&c.* to be kept in Cellars in Sand for ſpending.

DECEMBER.

PRune and Nail Wall-fruit and Standard-trees, and Plant Vines, *&c.* Alſo Stocks for Grafting. Sow and ſet all ſorts of Kernels, Seeds, and Stones; Trench Ground and Dung it, to be ready for Bordures or Planting of Fruit-trees. Turn and refreſh your Autumnal Fruits, leſt they taint, and open the Windows where they lye in a clear and ſerene day. Preſerve your Fruit from Froſts.

Let Planters note that the Wood of the Pear-tree, Plum-tree, Black-cherry-tree, Walnut-tree, and Cheſnut-tree, are excellent for Stools, Chairs, Tables, Cabinets, and many other Works for the

Joyner, and Sculptor; and tho the Wood of ſome of them be ſubject to the Worm and putrefaction, that may be both prevented, and cured if not too far gone, by anointing three or four times with Linſeed Oyle; it has been experimented in a Walnut Table, where it deſtroy'd Millions of Worms immediately, and is to be practiſed for Tables, Tubes, Boxes, Mathematical Inſtruments, Bedſteds, Chairs, Rarities, *&c.* Oyl of Walnuts will do the ſame, is ſweeter and a better Verniſh, but above all is commended Oyl of Cedar, or that of Juniper. But the more curious may uſe this great ſecret (diſcover'd by Mr. *Evelin*, *Page*, 70 of his *Sylva*) *viz.* put common Yellow Sulphur into a Cucurbit Glaſs, upon which pour ſo much of the ſtrongeſt *Aqua Fortis*, as may cover it three fingers deep, diſtil this to dryneſs, which is done by two or three Rectifications: Let the Sulphur remaining in the bottom (being of a Blackiſh or ſad Red Colour) be laid on a Marble, or put into a Glaſs where it will eaſily diſſolve into Oyl: With this Anoint either what is infected, or to be preſerved of Tymber, it tinges Wood with no unpleaſant Colour, by no Art to be Waſhed out, and ſuch a preſervation of all manner of Woods, nay of many other things as Ropes, Cables, Fiſhing-nets, Maſts of Ships, *&c.* That it defends them from putrefaction, either in Waters, under, or above the Earth, in the Snow, Ice, Air, Winter or Summer, *&c.*

FINIS.

ADDENDA.

1. TO the end of the firſt Chapter, ſhould have been added the following, *viz.* And when Stocks are removed out of the Seminary into the Nurſery, or elſwhere, be ſure to cut off as well the greateſt part of the down right Tap, or Heart-root of Stocks; as alſo the ends of all other Roots, and then to ſet them as ſhallow as poſſible, ſo as they may be able to take good Rooting.

2. AT the end of the 6th *Sect.* in *Chap.* Second, this ſhould have been added, *viz.* Be ſure therefore to let your Stocks for Pears and Apples be well grown before they are Grafted, that they may be able to make ſtrong, and tall Shoots the firſt year after Grafted; for if Grafted the ſame year they are removed, or the next year, not one of many makes a good Tree; beſides there are ſeveral ſorts of Fruit-trees, as Pearmains, Winter-queenings, and July-flower-apples, *&c.* that will not make a Tree worth your labour, unleſs Grafted on a luſty plump Stock; becauſe they naturally

Shoot weak and crooked; ſo divers ſorts of Pears, of which the Wardens are the worſt to make a handſome Tree of.

3. AT the end of the firſt *Sect.* in *Chap.* ſeventh, the following ſhould have been added, *viz.* And indeed all Land proper for Corn, as Wheat, Barley, Rye, Beans, and Peeſe are proper for Fruit-trees: but the moſt improper are extream hot and dry Sands, and on the other ſide grounds very Wet and cold.

4. AT the end of the ſeventh *Chap.* page 86, the following *Sect.* ſhould have been added, *viz.*

§. 23. After your Trees are tranſplanted into Orchards, the greateſt care and charge is to keep them ſafe from being abuſed, either by Weeds that may grow about them, Suckers that may grow out of them, between the Roots, and ſpreading Boughs, and from all Cattle, Hares, Coneys, and Canker (for which ſome affirm Hogs-dung either mixed with the Earth, or ſome laid on the top about the ſtem to be an excellent remedy) and in caſe where they are digged or Plowed about the Roots, your Trees will thrive much better, and grow twice as faſt.

ADDENDA.

5. IN Page 99, at the end of the tenth *Sect.* the following ſhould have been added, *viz.* Obſerve in ſetting Fruit-trees to cut off the greateſt part of the down-right Tap, or Heart-root, and alſo the ends of all the other Roots of the Tree, and let not the top of the uppermoſt Roots be above two Inches under the Surface, and the bottom of the Roots not more than nine or ten Inches below the Surface of the Earth; and if the Hole the Tree is to be ſet in, be digged deep, and fill'd up again with good Earth before the Tree is Planted (unleſs the Earth be very well trod down) the Tree and all will ſinck together, and never proſper: therefore in ſuch a caſe, 'its beſt to ſet the Tree ſo ſhallow as to raiſe the Earth ſix or ſeven Inches above the Roots about the ſtem, and to cover the uppermoſt Roots with good Earth, to prevent that misfortune.

6. AT the end of the third line in Page 163, the following ſhould have been added, *viz* You may alſo obtain many excellent Sets of Currans and Gooſberries, if in *January*, or beginning of *February*, when the weather is open, you lay down ſeveral Limbs and Twiggs of them, flat and cloſe to the Earth, and ſo keep them down by a hooked ſtick driven into the Earth, or a Brick ſtone; then cover every Limb and Twigg ſo laid down, all along

two Inches thick with good Earth, except the top Branch or Twigg, which muſt lye out and be uncover'd, and by that time the next year, you'l have abundance of well Rooted Plants, fit to tranſplant: take care to keep that part of the uncover'd Stock, which is between the old Root and the Cover'd part, that it run not out in Buds or Branches, for if it do, the Twigs will be rob'd of that nouriſhment which ſhould feed them: Alſo remember to keep them clear of all Graſs and Weeds that may in the leaſt annoy them.

7. AT the end of the 22 *Chap*. Page 167, the following ſhould have been added, *viz*. Peaches and Nectarins are Propagated only by Inoculating, and that on Stocks raiſed either on Peach-ſtones, or Plum-ſtones; But obſerve that Stocks raiſed of Peach-ſtones will be ſooner ready to Inoculate, and the Buds will take very ſure that are Inoculated into them; but they muſt be carefully and tenderly uſed in the removal, and muſt not be expected to make long laſting Trees.

Stocks from Plum-ſtones, and Budded with a Peach will make a more firm and laſting Peach-tree; and ſuch as will bear Fruit well.

Therefore rather raiſe Stocks for Peaches, Nectarins, Apricocks, and Plums from Stones of the Wheat-plum, which is a White Plum ripe in *Auguſt*, (if you can have them) or in want of them from the Stones of the White Pear-plum, which is generally commended and uſed, or of other good White Plum whoſe Tree puts forth large Shoots or Branches.

The Suckers likewiſe from the Roots of the ſaid Wheat Plum make excellent Stocks for Peaches, Nectarins, Apricocks, and Dwarf and Wall Plum-trees.

8. AT the end of the 23 *Chap.* Page 169, the following ſhould have been added, *viz.* Strawberries are increaſed by ſetting the young Roots, which increaſe from the ſtrings which run from the elder Plants, they are to be found in Woods and ſuch like Places, from whence many provide themſelves as well as in Gardens; they are Planted at divers Seaſons, but principally at the Spring and Fall; but many refuſe to ſet them in the Spring, becauſe then ther's a Summers Weeding, and little or no Fruit the firſt year, ſo that moſt Plant about the 24th of *Auguſt*, or Michaelmas, and ſomtimes later, but ſomething ſooner is better; for then they'l have got ſtrength, and bear

both more, and fairer Fruit. Set them about half a foot aſunder, which is near enough; and if you'l have fair Fruit and your Bed laſt longer without renewing, or new Planting; often cut away the ſtrings that run from the Roots, otherwiſe they'l ſtarve one another; alſo every Winter, not Summer, new mold them, and in dry Weather often Water them, chiefly in Blooming and Fruit time, but do it throughly; where not carefully looked after, a Bed of Strawberries laſts not above two or three years at moſt.

The ordering of great Strawberries differs but little, only to be ſet at a larger diſtance, and the Root kept molded up, and the Stalks for Fruit tied up, and often Watered in dry Weather.

9. AT the end of the 25th *Chap.* page 174. the following ſhould have been added, *viz.* Cherries are propagated by Grafting or Inoculating on Stocks raiſed from Cherry-ſtones, ſet or ſowed, or young wild Chery-trees got out of Woods, *&c.* or Suckers from the common harſh Red Cherry. The wild Stocks make large handſome Standard Trees, but though Grafted with a good kind, do not bear Fruit ſo plentifully as the Suckers of the Red being Grafted do, which

ADDENDA.

Suckers are fitteſt to Graft Cherries on for Wall or Dwarf-trees, being of much ſmaller growth than thoſe of the wild kind are. No Fruit-trees proſper under the dripping of Walnut-trees, and Cherry-trees. Note that Suckers of Pears, Cherries, and Wheat Plums, make good Stocks to Graft Pears, Cherries, and Plums on, for Wall-trees, or Dwarf-trees.

ARRATA.

PAge 39. l. 7. r. diſpleaſe. P. 43. l. 31. r. Slicing. P. 64. l. 14. r. Bud or Sprig. P. 64. l. 21. dele a Bud. P. 80. l. 16 r. if it be not Springey. P. 83. l. 10. After Walnut Trees, add Cheſnut Trees or ſome large growing Trees. P. 83. l. 25. for old, r. cold. P. 88. l. 21. for Sap, r. Stop. P. 90. l. ult. r. which P. 95. l. 3. r. Sackcloth. P. 97. l. ult. for Clay, r. Clap. P. 102. at the end of 16 Sect. r. Chap. 12 Sect. 10. 11. 12. P. 118. l. 11. r. bare P. 140. l. 19. r of. P. 144 l. 3. r. one. P. 150. l. 16 r. Tap. P. 159. l. 3. r. fall. P. 176. l. 7. r. Great Musk. and l. ult. for Meet, r. Meat. P. 178. l. 9 for is, r. are. P. 199. l. 1. after Broom, add, when cold. P. 208. l. 25. r. Quantity. P. 216. l. 30. after Quarts, add, in a Barrel or Hogſhead. P. 228. l. 14. after Currans, add, Elderberries. P. 235. l. 12. for eightpence, r. eighteen pence. P. 164. inſtead of theſe words. viz. about 14 days before Midſummer, r. ſomtimes in the Month of May.

THE APPROBATION OF THE Colledge-Royal Of Phyſicians at *ROCHELLE.*

WE ſubſign'd, Doctors of Phyſick of the Colledge-Royal of this Town, and deputed by our Company to Read and Examine a Book Compos'd by one of our Fellows, which has for Title, *Of the uſe of the Fruits of Trees*, do certify that there is nothing in it which is not conformable to good Phyſick. In Teſtimony of which we have ſubſign'd this Approbation, at *Rochelle* the 8th of *March.* 1683.

Chauvet,
Arault, } Cenſors of the ſaid Colledge.

THE

THE PREFACE.

T*Here are Perſons who perſwade themſelves that its a crime to add any thing to Antiquity, and who ſay, That nothing can be invented of new more than what the Ancients have ſaid; and that it is a vain Glory and Preſumption to imagine we can ſay any thing which has not been written. But if it were free for me to Anſwer this Opinion, I would ſay, That Arts are not of thoſe things to which nothing can be added, and that the Older the World grows, the more they are carryed on to perfection.* Anatomy *did not appear in ſo* *great a Luſter in the Time of* Galen, *as in our Days: and the* Art of Pruning Fruit-trees *was not ſo perfect in the Time of the* Curate of Henonville, *as at preſent. We are like a Dwarf on a Giants ſhoulders. We ſee much farther than our Fathers, and we daily diſcover things which they knew not. I will not ſay for this, that there are not any precepts or Rules found for Pruning Trees in the* Books of Agriculture and Gardening *which have been Printed within Twenty or Five and Twenty Years, I candidly own that there are ſome; but in truth they are ſo few in Number, and the greateſt part ſo obſcure, and ſo little to be rely'd on, that I very much doubt whether they may be followed without committing faults. If on the contrary you ſtick to thoſe which I give in this Tract; many Years experience has aſſur'd me, that Trees Prun'd according* *to the Rules which I Eſtabliſh, will produce great Fruits in abundance. I have therefore reduc't* The Art of Pruning Fruit-Trees *into four Chapters; and I have caus'd ſeven Figures to be Grav'd which I Judg'd neceſſary for the underſtanding of what I ſay: The firſt Chapter Treats of Pruning Trees in the Month of* February. *The ſecond explains that of the beginning of* May. *The third teaches the Pruning at the end of* May *and the beginning of* June. *Laſtly the Fourth compriſes the Pruning of* July. *I thought fit to reduce this Book into a form of precepts, without forming a continued Diſcourſe; becauſe often we have need of one precept, without having need of another: and I have writ it after ſo popular a manner that the moſt Illiterate Gardiners might comprehend what I would ſay.*

The Preface.

Opus arduum nova Conſcribere, Inaudita edocere, Inſolentia præceptis firmare, magis arduum aliquid Antiquitati addere.

THE

THE
Art of Pruning,
OR
Lopping Fruit-Trees.

I Suppoſe that a Tree has been well Planted, and ſet in a fertile Soil, that the Root of it has been well cut, that good choice has been made of the Plant and of its kind; and that it has ſome years Growth, to be able to endure the Pruning-knife.

CHAP. I.

The Pruning or Lopping of Fruit-trees, for the Month of February.

ALmoſt all Trees begin to ſprout forth in *France* toward the end of *February*, or the beginning of *March*; and this is the motion which we call the riſe of the Sap, or the ſhooting of Trees. This nevertheleſs happens variouſly, the diſpoſition of the Air, the goodneſs of the Soil, the vigour or the kind of the Tree, make the Saps or ſhootings to come earlier or later: They come early in a dry year, and are backward in a moiſt.

This riſe of the Sap invites then Gardiners to Prune or Lop Trees in the Month of *February*, which is the moſt proper time for this work; and tho' it may be done all the Winter, however the Moon be diſpos'd, Trees being then at reſt as to their Branches; nevertheleſs it is much better to ſtay for this till the Colds are paſt, and that the Rains no longer infeſt the wounds which are made on Trees; by this means they ſeal themſelves in a little time, and ſoonner cover the wound which has been made on them.

Before you Prune or Lop a Tree, you ought to conſider the ſtrength and kind of it for rendring it beautiful and fertile; for all Trees are not to be Lopt after the ſame faſhion: We Lop diverly (for inſtance) a Peach-Tree and a Winter Pear-Tree; and its by Lopping of this laſt, that the skill of the Gardiner ſhews it ſelf the moſt conſpicuouſly, and that we judge beſt of his ability.

There are Trees which we dare not Lop, by reaſon of the abundance of their Sap; for the more we Lop them, the more Wood they ſhoot forth, and the leſs Fruit; even the Flower-buds yield Wood, which happens often to the Tree, which yields the delicate Pear call'd *the little Rouſſelet*; to the lateward *Bergamot*, to the *Virgoleuſe*, to the St. *Lezan*, *&c.* But when theſe ſorts of Trees have ſhot forth their full, after this they bear but too much. In this occaſion Lop ſometimes ſhort, and ſometimes long, or not at all: take away ſometimes the young Wood, and preſerve the old; another while cut away the old, for the Tree to grow young again; at another time cut away the Branches, and all the falſe

Sprouts, but remember never to diſgarniſh the Stock, by Lopping away all the little Branches of the ſides of the Tree, and making the Trunk bare.

Gardiners have a very true Maxim, *Lop in fair Weather, in the decreaſe of the Moon, and in the end of the Saps, or rather when Trees are at reſt.*

The decreaſe of the Moon of *January*, which happens in *February*, is the true time for Lopping Trees, and for preſerving Grafts; not but this Rule has ſome exception; for weak Trees, and thoſe that are Planted but of that year, ought to be Lopt at the new Moon, to make them ſprout vigorouſly: And we muſt remember that Trees ought not to be cut when we Plant them, but we ought to ſtay till the Month of *February* following.

When you Plant a Graft of three years, which has Flower-buds, preſerve ſome to ſee the Fruit in the firſt year: It is of theſe ſorts of Trees that you muſt always make choice, they ſhew from their beginning an aſſured fruitfulneſs, and bear afterward a great deal of Fruit as long as they live.

Becauſe it is known that an abundance of Sap makes but Branches, and that a little or mean Sap makes Fruit: and moreover that the Moon has leſs influence on ſublunary things, when ſhe begins to be in the Wain, than when ſhe Increaſes; experience has taught us that the decreaſe of the Moon is the moſt kindly time for Lopping Trees, which have then leſs of motion. The decreaſe is from the time of the Full to the New, nevertheleſs ſome will have it that we may Lop Trees during the time that the Moon is not horned, that is to ſay, from her eighth day to her one and Twentieth: They ſay that it is not only the Moon which cauſes Fruit on Trees, but the diſpoſition of the Branches; and that it ſuffices that the Moon has ſtrength, provided that on the other ſide ſhe finds in a Branch, Fibres tranſverſe and diſpos'd to cauſe Fruit-buds to be there form'd. True it is, experience has taught me that the Seeds of Flowers caſt into the Earth during all this time, turn double ſooner than thoſe that are Sown in another time.

We ought firſt to Lop Apricock, Neſtarin, and Peach-trees, *&c.* becauſe they ſhoot forth the firſt; the Winter Pear-trees follow next, after theſe thoſe of Autumn and of Summer, and the Portugal Quince-trees: We ought ſhortly after to Lop and Prune Plum-trees, and Apple-trees, and laſtly Spaniſh Pomegranet-trees, becauſe all theſe Trees ſhoot forth the one after the other; but above all, we ought not to Lop this laſt till it has ſhot forth a little, that we may the better diſtinguiſh the weak or dead Branches.

After the Obſervations which we even now made, we ought to begin to Lop and Trim up a Tree by one of its ſides from the lower part to the top, and we ought afterward to carry on our Work without confuſion, and to take one Branch after the other. This ſide being thus Lopt and paled, we deſcend on the other ſide from the top to the bottom in the ſame Order.

We muſt here remember always to cut the Branches in the form of a Hinds foot, ſo that the Sun may not dry the wound, which ought to be as far as we may on the North ſide; but after ſuch a manner that the ſloping ſide of the wound be not too ſtraight downward, to the end that the knot be not endammag'd; otherwiſe the eye which ought to puſh forth wood, being cut too much by the ſlope of a too ſtreight deſcent (chiefly in tender Trees) will not puſh forth at all or weakly, and will communicate ev'n to five or ſix eyes the evil of a wound ill made.

We muſt further remember to cut always a Branch near a Wood-bud, and never near a Flower-bud; becauſe in this laſt Lopping, the Fruit which would come there, would not be ſecured by the Leaves againſt the injury of the Air. Moreover the Branch would be expos'd to the Air, and finally the wound would not cloſe it ſelf, nor ever come to an Eſchar the Pears carrying away all the Sap, that ought to make it:

We ought not moreover to leave a Stub to a Branch which we cut at a Wood-bud, that we may give way to the Branch to cloſe it ſelf in a ſhort time by the ſprout that ought to grow there; I ſay not the ſame of a Branch which we cut an Eye or two from the Trunk; this may put forth near the Stub, which we leave there, ſome Fruit-buds, or ſome Branches which will have diſpoſitions to produce them, at leaſt if the Branch be little or of a mean ſize; for if it be great, it ought to be cut near the Tree. If in Lopping where we leave a Stub, nothing ſhoots forth there, the year following the Stub muſt be cut ſmooth to the Tree.

I ſpeak not here only of Fruit with Kernels, we ought ev'n to leave a Stub to Fruits with Stones, not to make them puſh forth Wood there, for this is not their Genius, but to keep them from being corrupted by the Weather, and not to cauſe them to puſh forth Gum there, which is their Sap, and in this occaſion their Capital Enemy.

When the little Branches are too confus'd, care muſt be taken to cut them off an Eye or two from the main Branch, or near the Trunk as I have ſaid, both to disburthen the Tree, and to make it puſh forth ſome Branches anew, but after ſuch a manner, that there be always room for placing the Sprig which will come.

We ought alſo to Obſerve that to fill out a Tree well, its Branches ought not to be diſtant from each other above a Fingers breadth.

You muſt never cut Fruit-buds whatever reaſons are alledged thereon; Trees at that time do what they are ordain'd for, by diſplaying their Riches, and Nature gives us what we demand of her for recompence of our cares and Labours.

We know a Fruit-bud by its Figure, by the ſmall bearer where it comes, by the motion it makes in the ſhoot of the Tree or finally by the abundance of Leaves that accompany it.

If a little and long Branch be well ſtor'd with Flower-buds, do not cut any of them (I ſay it once again) and do not ſo much as touch the Branch, wait rather till the Flowers are come forth of the Bud to deſtroy them, or till the Fruit are kern'd to cut with Sciſſars the Stems of the leaſt and worſt form'd; by this means you will not cut away the Bud which will produce other Fruit the following years when the Branch has fortified it ſelf.

Neverthele ſs, if for ſome great reaſon, we are Obliged to cut Flower-buds in a Branch bared of ſhoots, for drawing thither the Sap, and to cauſe ſome void ſpace to be fill'd, and that there are no other Branches found for ſupplying this Default, we muſt cut the Branch at a Wood-knot to fill out the Tree, and we muſt take good heed not to cut it near the Flower or Fruit-buds, for the reaſons which we have mentioned, and after this we muſt take away the Fruit-buds to give it more ſtrength to puſh forth.

The old Buds which have yielded Fruit for many years together, and which give us no longer hope of producing more, muſt be cut away to embelliſh the Tree, and to diſburthen it of ſomewhat which is uſeleſs and ſuperfluous.

The bearers which are two, three, or four Inches long are the beſt, eſpecially when they Iſſue from the great Branches near the top of the Tree; they bring forth many years one after the other, and bear very great Fruit. Thoſe which are bared of Branches laſt indeed a long time; but they do not bear ſo Beautiful Fruit, and often they are drain'd, unleſs you cut the Stems of the Pears with Sciſſars; and thoſe which are not above a nail in length, and which come from the Trunk, bring forth very great Fruit; but ordinarily they laſt but a year

A Shoot of *Auguſt* never yields Fruit, the Wood is not then well fill'd with Sap, it ought always to be cut away, unleſs it be extreamly neceſſary for filling a void ſpace.

If a uſeleſs or irregular Branch grows behind, it is always cut away, ev'n tho' it has on it a Flower-bud; for the Fruit which would come of it, would be ſpoil'd by the ſhadow of the Tree, and would be good for nothing: if it be before, we cut it an Eye or two from the Mother Branch, to try to make ſome Flower-buds ſpring forth there.

A Branch bent by force bears much Fruit, but it is ſmall, unleſs it were plyed ſo the firſt year; the reaſon is evident, its Fibres are bent, and the Sap does not carry it ſelf briskly to it.

Sometimes forked ſprouts, or knots of Scions ſhoot forth from certain places of Trees, when they are Old and at a ſtand that they need to be cut to renew them. In this occaſion we ought to cut at a good length a Maſter Sprig in Pear-trees and Apple-trees, and to cut ſome an Eye or two from the Mother Branch, and cut others near the Trunk, but in Nectarin and Peach-trees, we ought to cut all the leſſer Branches an Eye or two from the Mother Branch, and let the longeſt and ſtreighteſt run on, tho' it would be the ſhorteſt way in theſe laſt Trees, to cut a great Branch near the Trunk, or to cut the Trees two or three Fingers breadth from the Earth to renew them.

You muſt cut one Branch ſhort betwixt two long to fill out the Tree. The year following the ſhort Branch muſt be cut long, and the long ſhort: It is the ſecret to have much Fruit, and to preſerve Trees; there are ſome who ſay that a Tree Lopt after that manner is not agreeable to behold: but I deſire them to ſtay to conſider them till the Month of *May*; and I am well aſſur'd they will change their ſentiment.

A Tree is ordinarily compos'd of three ſorts of Branches, we find on it *Ravenous* or *Prodigal*, *Indifferent*, and *Fertile*.

1. The *Ravenous* grow moſt commonly at the top of the Tree, and ſometimes they ſpring from an Old Branch; they are finely even and without Moſs, greater and more ſmooth than the others.

2. The *Indifferent* are of a mean ſort, among which there are ſometimes ſome well ſupply'd with Juice, they bearing ſometimes Fruit within three or four years.

3. The *Fertile* are ordinarily ſmall, and

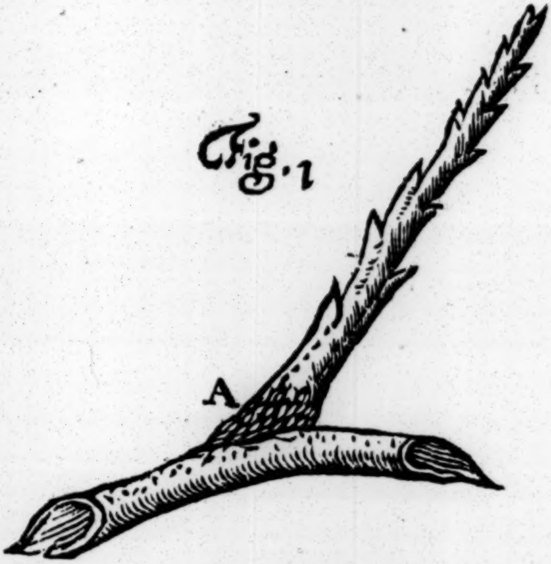
growing athwart; ſometimes there are found of them great and long; they always bear Fruit; there are counted five ſorts of them.

1. The firſt have in their ſource, and in the place whence they ſpring, little Wrinkles like Rings; which ſhew that in this place there are tranſverſe Fibres in the Wood. Its in theſe Fibres where is made a ſlow circulation of the Sap of the Tree, which produces the Flower-bud, whereas when the Fibres are all ſtreight, the Sap is carryed upward vigorouſly and without reſiſtance, and not ſtaying it ſelf in any place, it produces nought but Wood: We may Obſerve theſe tranſverſe Fibres in cutting the Wood where there are of theſe Rings, the cut will not be cloſe and even as elſewhere.

The Figure following will Repreſent to you the Fertile Branch.

A. The

Fig. 1



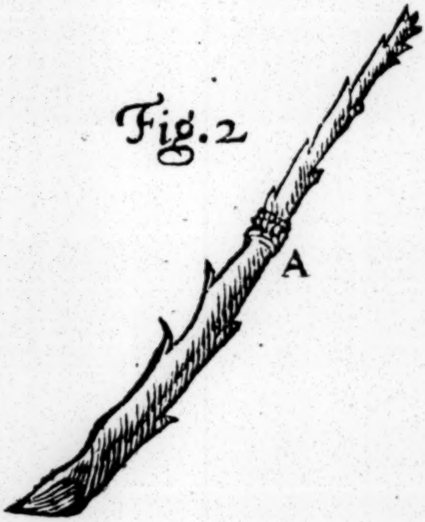
A, The Wrinkles and Rings of a Branch of a *Bon-Chrêtien* Pear-tree.

2. The Second Fertile ſprouts have no Rings in their Origine, where they Iſſue from their Mother Branch; but they have in the middle, that is to ſay, when an Indifferent Branch, having not been cut in *February*, ſhoots forth Wood in *May*, and forms Wrinkles at the beginning of its ſhoot; or when a Branch in its middle forms Rings betwixt the end of its ſhoot of *May*, and the beginning of that of *June*, which may be known eaſily, if a Man will make the experiment; for in cutting the wood in this place, as I ev'n now mention'd, the cut will not appear

pear ſmooth as elſewhere, but uneven by the tranſverſe Fibres that are there.

The following Figure Repreſents the Second Fertile Branch in a *Bon-Chrêtien*.

Fig. 2

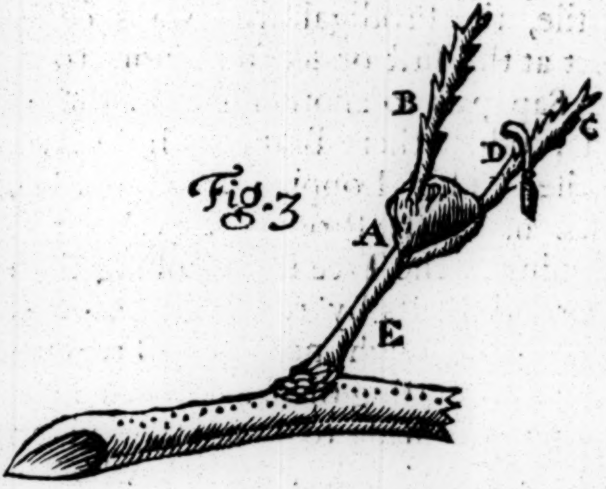


A. Rings, and Wrinkles at the beginning of the Shoot of *May*, or betwixt the end of the Shoot of *May*, and the beginning of that of *June*.

3. The third kind of Fertile Branches Iſſues from a Flower-Bud, which has fail'd to blow ſometimes for outward cauſes, and often through the abundance of the Sap of the Tree: They Iſſue alſo from a Bud which has yielded Pears; they are call'd Fertile, becauſe they come of a Flower or Fruit-bud which experience diſcovers

covers to us to have tranſverſe Fibres.

The third Figure ſhews it us in a little Branch with Flower and Fruit-buds of a *Bon-Chrêtien.*



A. The Bud which has yielded Pears, or has fail'd to blow.

B. The Fertile Branch which we muſt let grow on.

C. The leſſer Branch which we muſt cut away.

D. Where it ought to be cut at two knots.

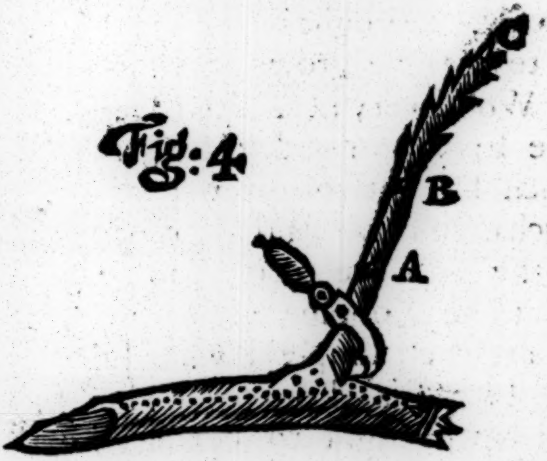
E. The Bearer.

4. The Fourth kind of Fertile Branches are thoſe which the year before were Indifferent, and which are become Fertile through the little Sap that is come to them, and by the Buds which are grown to a fulneſs.

5. Finally, the Fifth are thoſe which have a Flower-bud at the end of the Branch.

1. Of theſe three ſorts of Branches, that is to ſay, of the Prodigal, Indifferent, and Fertile, the Prodigal are always cut very ſhort at the firſt or ſecond knot, to make the Sap paſs to another ſide of the Tree, and produce there Branches Indifferent or Fertile. This Lopping reiterated many times, makes the Prodigal Dye, or at leaſtwiſe hinders the Tree from puſhing them ſo vigorouſly. Its by reaſon of this experiment that we ought not to cut Trees much, becauſe by cutting them in all their Branches, they are made to Languiſh and afterwards to Dye. The Prodigals which have been cut many times the precedent year, ought to be Lopt at the firſt knot near the Mother Branch whence it grows, as the Fourth Figure ſhews.

Fig: 4



A. A Prodigal cut in *February* at the Second knot.

B. A Prodigal cut in *June* at the Second knot.

C. A Shoot of the Prodigal in *July* which has not been cut, becauſe it has ſhot very little.

D. Where we muſt cut a Prodigal in *February*, of the following year at the firſt knot.

Lop therefore the top of the Tree, where the Prodigal Branches are Ordinarily found, and ſpread it at the bottom and at the ſides; this Lopping gracefully fills a Tree, and hinders it from Growing to too great a height and from deſtroying it ſelf in a ſhort time.

2. As for the Indifferent Branches, ſome

of them ought to be Lopt, others not; that is to ſay, we ought in the Month of *February* to let thoſe grow on which have Buds for Wood very near each other, and which iſſue from a good place; as alſo thoſe which have two great Leaf-buds which touch each other at the end of the Branch; to the end we may know their Genius at the Lopping of *June*. The greateſt and beſt ſupply'd with Juice will be the beſt for keeping. The Indifferent which we ought to cut at the third or fourth knot, are thoſe which are leaſt diſpos'd to bear Fruit, and which have the Leaf-buds far from one another.

3. The Fertile ought never to be Lopt, tho' they are as long as the Arm; Trees left to run up from which we Lop no Branches and which bear ſo much Fruit, ſhew us well that we ought never to Lop the Fertile: nevertheleſs, if there be need of them for filling up a void ſpace where it happens, and that no other Branch can be found for this purpoſe, I permit them to be cut for embelliſhing the Tree.

And to explain my ſelf farther in ſpeaking concerning a Fertile Branch, I ſay that that which has Rings in its ſource, Wrinkles at the beginning of its ſhoot of *May* or of *June*, or finally knots near each other, ought not to be cut without a great neceſſity;

eceſſity; for experience has taught me hat all theſe Branches bear Infallibly their ruit toward the end of their Branches, vhich our ill Gardiners always cut away. o at the beginning of *February* Obſerve xactly the end of the ſhoots of the precedent year, that you may always cut the ranch when the Saps are at a ſtand at the irſt or ſecond knot in the Wood which omes after, and to leave all the knots vhich will be as many Flower-buds, that vill not fail to form themſelves there in wo or three years. Its an Obſervation vhich will embelliſh your Trees by the bundance of Fruits which they will produce. That which I ſay being ſomewhat ifficult to comprehend without ſeeing it, he fifth Figure will make you underſtand it.

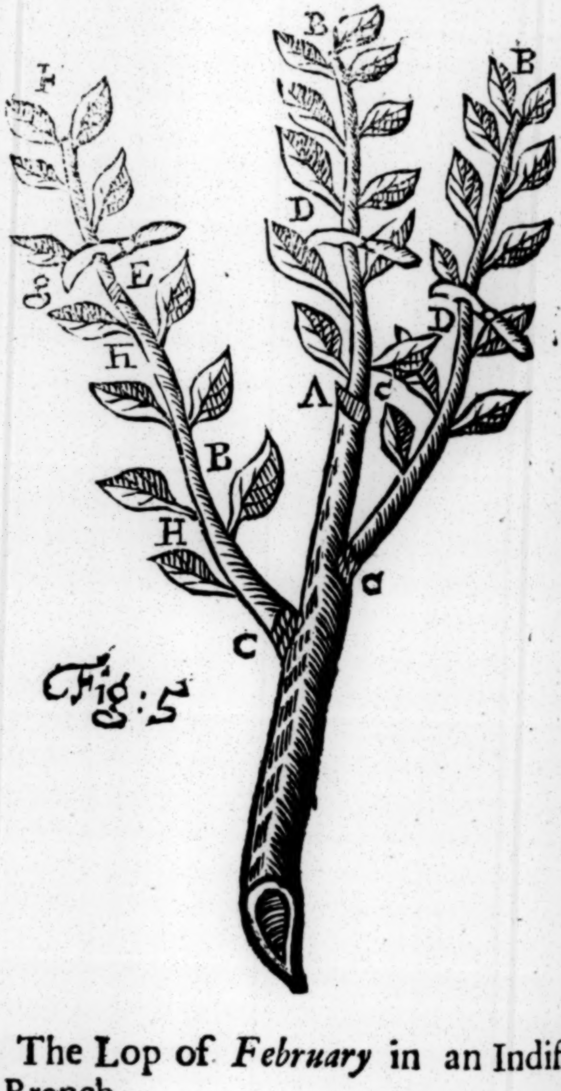


Fig:5

A. The Lop of *February* in an Indifferent Branch.

From *B.* to *C.* three Branches of the ſhoot of *May.*

D. The Lop of *June* in Indifferents.

From *D.* to *E.* The ſhoot of *June.*

From *E.* to *F.* The ſhoot of *Auguſt*, the Wood of which is very full of Sap.

G. Where we muſt Lop in *February*, of the following year when the Saps are at reſt.

H. Where in two years Fruit-buds will be form'd in a Branch which from indifferent is become Fertile.

The Fertile Branches which Iſſue from a Bud which has yielded Fruit, and which have not been cut at the beginning of *May*, ought not to be cut in *February*, unleſs they are double. In this occaſion we muſt let run the better, and Lop the other at the firſt or ſecond knot. Experience has taught me that theſe Branches never fail of bearing Fruit the ſecond or third year, See the third Figure.

Finally, the ſame Experience has taught me that the Fruit-buds which come at the end of the Branches in Trees whoſe Genius is often to bear their Fruit in this place, ought not to be cut, eſpecially if they produce little, and we ſhould have but few *Gracioli*, *Coins Francs*, nor *Grenades d'Eſpagne*, if we ſhould cut theſe ſorts of Trees at the end of their Branches.

It is ſaid that the Fruits which come at ends of Branches are ſmall, and that the Wind blows them down. I own that the firſt default is without remedy, but the

Second is not ſo, for we may bind up the Branch laden with Fruit againſt the Wind. Nature doing well what ſhe does, when ſhe places a Fruit-bud at the end of a Branch of a Pear-tree, has an intent to render this Branch Fertile; for the Fruit which ſhe produces there, ſeals that Branch, and hinders it from puſhing forth afterward; this Branch receiving not then much Sap, forms in all its length an Infinite number of Fruit-buds, and two or three years after it is all deckt with them; which it continues to do for five or ſix years following, till the Branch is worn out; if this Flower-bud be cut away the Sap will come freely and vigorouſly into the Branch cut, and inſtead of the Fruit which Nature had there deſign'd, we ſhall have nought but Wood through the Gardiners Ignorance.

When we will have larg Fruit, eſpecially in the *Bon-Chretien* and in other Trees, which bear great, we ought to Lop ſhort, the nearer the Fruit-buds are to the Trunk, the greater the Fruit is, for it receives more of the Juice.

There are Gardiners who make the Buſh of a Tree too thin by cutting away the little Branches, and leaving the Trunk almoſt bare: we might leave in it ſome clear ſpace in the middle and the ſides, to give entrance to the Sun which muſt colour the Pears, but we ought not to cut it too much: the ſhadow of the Leaves ought to ſecure the Trunk of the Tree against the parching heat of the Sun which makes it chop, and which breeds the Scab and the Canker by the dryneſs of its Bark. True it is that we ought to cut ſhorter Trees with a round Buſh head than *Eſpaliers*, and that we ought not to let them run up too much: In a ſtrong and moiſt Soil we muſt keep a Buſh head thinner of Branches than in another Soil, which is poor and dry; but in all places we ought to keep it well filled, and not cut away the Branches in the midſt of it as much as is done at this day.

The niceſt Trees do not delight in this Figure, Pear-trees do not much take to it, and Apricock-trees leſs. Trees Grafted on the great Quince-tree, are more proper for it than thoſe which are Grafted on a Pear-tree, theſe later cannot be reduc't, the more you cut them the more they ſhoot of Wood; and beſides with this, they do not bring forth much Fruit, their nature being to be always high.

Cherry-trees which bear ſharp Cherries, grow very well with a Buſh head, provided that they are Grafted on the ſmall bitter Cherry-tree; and they take to it better yet if they are permitted to grow up, for they do not much delight in the Pruning-knife, and leſs when they are old.

The Plum-tree is of the ſame nature with the Cherry-tree; it is ordered alſo after the ſame manner.

We ought rather to cut a Branch away, than to cut it in many places; the divers wounds which we give Trees, decay them, and make them dye languiſhing, witneſs the *Prodigal*, which we kill by often cutting.

Experience has taught me for many years following, that Fruit with ſtones (that is to ſay the Apricock-tree, the Nectarin, and the Peach-tree) ought not to be Lop't as Pear-trees.

We ought only to cut away Branches, and ſometimes the greateſt to make them renew themſelves: and contrary to the cuſtome of other Trees, they bear in young ſhoots which lade themſelves with Fruit the firſt year. Its after this manner that they laſt Twenty or Thirty years; the more therefore that a Peach-tree ſhoots forth, the more Fruit it bears.

We never ought in theſe Sorts of Trees to cut a Branch in the middle, tho' the Apricock-tree is not ſo much damnified by it as the others; becauſe they have a larg

Pith very ſuſceptible of the injuries of the Air. The wound often cauſes five or ſix knots to dye in a Branch, which has been cut after that manner, and by taking off with the Pruning-knife the end of the Branch, as is ordinarily done, we carry away at the ſame time the Fruit that ought to form it ſelf there, and we leave but an end of a Branch which brings nought but Wood.

I ſay it once again; the Fruit comes but at the end of the ſhoot of the two firſt Saps; if we Lop away this end, we carry away the Fruit, and we blockiſhly deprive our ſelves of that which we ſeek with ſo much paſſion. Its a remark which we ought well to Obſerve, for the Sap having ſpent and as it were wearied it ſelf after having paſt all along a Branch, does not exert it ſelf with ſo much vigour, and its motion is not ſo impetuous, nor ſo nimble at the end of a Branch as in the beginning of it; alſo it employs it ſelf rather to form Buds for Flowers when it acts mildly, than when it agitates it ſelf with ſo much præcipitation.

Becauſe Fruit with Stones ſhoot more briskly and more in confuſion than Pear-trees, we muſt alſo take good heed to Lop them with diſcretion. Theſe Trees having ſhot forth vigorouſly a Branch during one year, and having produced Fruit there, loſe their force in this ſame Branch the year following, and ſhoot forth nought but Scions here and there, but which are laden with an infinite number of Fruit; and the greateſt part of theſe ſame Scions dye the year following as well as all the annual buds of the Tree. When a great Branch is old we ought to cut it in its Source, as you may ſee in the Figure following.

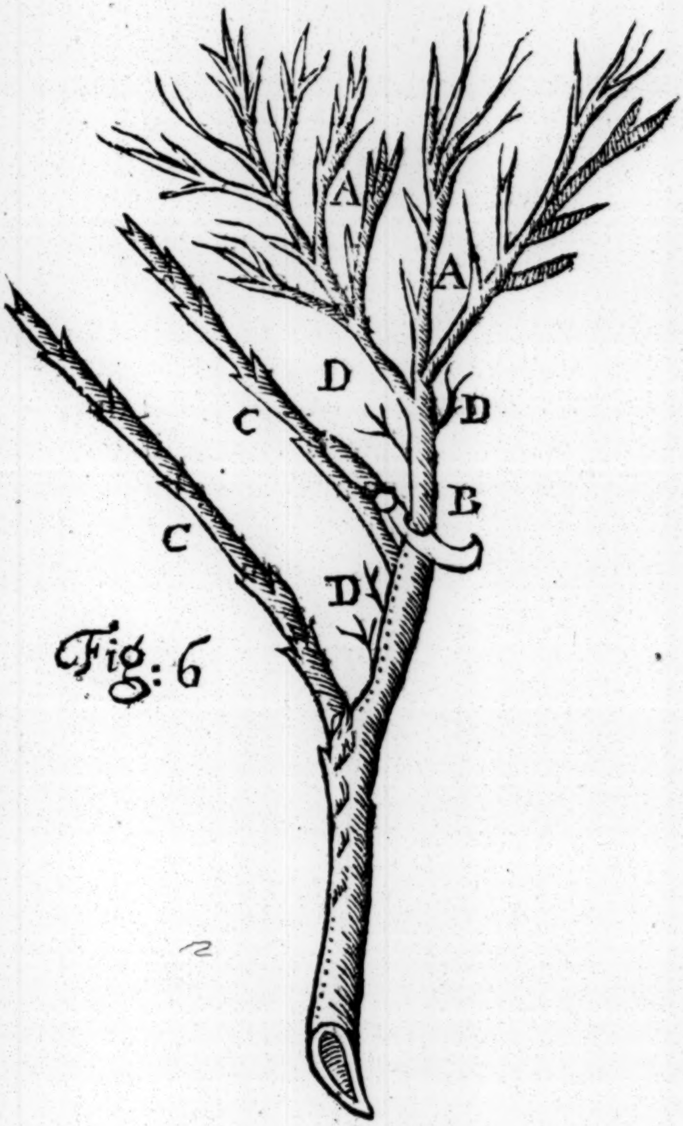


Fig: 6

A. Wood worn out of three or four years.

B. The place where it ought to be cut.

C. Young Wood of the year which ought not to be cut in the middle.

D. Flower or Fruit-buds of the precedent year, which are dry.

The Nectarine and the Peach-tree, being of the nature of thoſe Trees which ſhoot much in their tops, we muſt not hope to be able to ſubdue them as Pear-trees, and force them to fill themſelves well in the lower part: if we Lop them as theſe Trees, that is to ſay, if we Lop their Branches in the middle we hinder them indeed from ſhooting in their tops, but they do not fill themſelves for this in their lower part; they mount always, and by cutting them after that manner, no Fruit comes of it, and we kill them in a ſhort time.

In general, the Plum-tree and the Cherry-tree delight more in Lopping than the Apple-tree: but all three of them do not delight in it as much as the Pear-tree, which is the only Tree that endures it beſt. We muſt take nought from theſe three firſt Trees but the dead Wood, unleſs we will form them at firſt for *Buſh-trees* or *Eſpaliers.*

Becauſe the Corand-tree has much Pith, and that it comes eaſily of a ſlip, its nature does not endure it to be Lopt in the middle of its Branches, no more than the Peach-tree;

Peach-tree; above all we muſt take good care of cutting it, when we ſet it. We ought in an old Corand-tree to cut near the Root a Branch paſt bearing, in order to renew it, and to cut alſo from the lower part ſome young ſhoots of the year to hinder it from being too much confus'd. The young ſhoots which we preſerve, ſerve to renew it when we cut it in its old Wood. Nevertheleſs, tho' it does not delight in being Lopt, we make Buſhes of it, and form it in an Eſpalier, which is beautiful to behold, at the time that it is laden with Fruit.

I ſay the ſame of the Mulberry-tree, and of the Fig-tree, which cannot endure the knife by reaſon of the abundance of their Pith; the laſt eſpecially is viſibly damnified by it, unleſs we Lop from them great uſeleſs Branches, for rendring them regular: and neither of them can be made to grow low, they love too much the free and open Air.

Medlar-trees and Service-trees naturally grow high, the former endure the knife much more than the latter.

The Portugal Quince-trees, and the Pomegranate-trees of *Spain* will not be Lopt, becauſe they bear their Fruit at the end of their Branches. Nevertheleſs we may take from them entire Branches, which cauſe a confuſion, and which are old; and cut near the Trunk the uſeleſs Prodigals, which are uſual enough in theſe ſorts of Trees. As for the other Prodigals which embelliſh the Tree, and which in four or five years will yield Fruit, we ought not to Lop them.

Care muſt be taken to cover the great Wounds of Trees with a Plaiſter made of a pound of *Drogue a flambeau*, four Ounces of Roſine, and two Ounces of Sheeps Sewet. When we walk in our Garden in a fine day of the Month of *April*, we muſt have in our hand a Magdaleon of the Plaiſter ev'n now mentioned, we muſt cut a little of it with a knife, and after having wrought it betwixt the moiſtn'd Fingers, for rendring it a little ſoft, we muſt apply it on the great Wounds, which we had forgot to ſeal in the Month of *March*. And to the end that this Plaiſter may keep the longer on the Wounds, we muſt put on it a bit of paper as a binder, which we muſt preſs on ſoftly with the Finger, to the end that the heat of the Summer making the Plaiſter melt, the paper may preſs it, ſtay it, and glew it more to the Wood: it is what we ought to do in the two other Loppings following.

CHAP.

CHAP. II.

The Lopping of Fruit-trees, at the beginning of the Month of May.

PRoperly ſpeaking, it is not a Lopping that is done to Trees at this time; they are as yet in the motion of their Sap. We cut but Scions, which tho' Fertile of themſelves, bring in the mean time a great prejudice to the Fruit; at the beginning of *May* we muſt therefore take a particular care to cut away the uſeleſs Branches which grow by the Buds for Fruit, and eſpecially in Pear-trees; that is to ſay, to cut away at the ſecond knot a little Scion which comes among the cluſters of Pears: to delay this is not good, the Sap which ought to Communicate it ſelf to the Fruit, is carried into the ſhoot, which draws a part of the humour of the Fruit-bud, where the Pears are faſtn'd, which cauſes either that their Stem drys for want of Sap, or that they come very ſmall.

You may ſee what I mean in the following Figure.

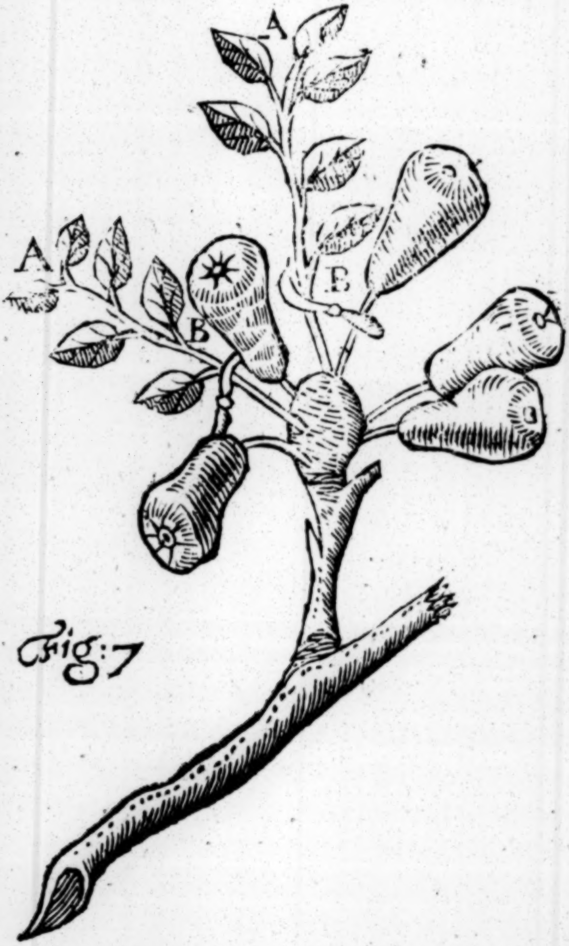


Fig: 7

A. A ſhoot which comes on the Fruit-bud through the abundance of the Sap.

B. The place where you muſt cut it.

CHAP. III.

CHAP. III.

The Lopping of Fruit-trees at the beginning of June.

IN the Decreaſe of the Moon of *May*, which happens often in *June*, you muſt Lop Trees for the ſecond time; but with more moderation than in *February*: for we ought never in *June* to cut great Branches, and properly ſpeaking, it is but a relopping of Trees.

We muſt wait above all till the Sap be ended, according to the Maxim which we have alleag'd before, and it will be good to repeat it here: *Lop in Fair weather, in the Decreaſe of the Moon, at the end of the Saps; or rather when Trees are at reſt.*

The reſt of a Tree is known by a bud Garniſh't ordinarily with two Leaves, which forms it ſelf at the end of the Branches, and we obſerve chiefly this bud at the end of *May*, or at the beginning of *June*, that is to ſay, after the firſt Sap or ſhooting.

The ſecond Sap or ſhooting of Trees begins ordinarily in the middle of *June*, and ends a Month after, towards *Magdalen*-tide, ſo that betwixt the end of the firſt Sap, and the beginning of the ſecond there is about a Month : and its at this time that we muſt cut Trees again.

The effect of this re-cutting is to make the Buds of the firſt Sap to fill up, to force Trees to make Fertile Branches, or to form Flower-buds for the following year; whereas the Lop of *February*, furniſhes but Wood to yield Fruit three years after, if we except the *Orange*, the *Bergamot*, the *Double-flower*, the *Summer Bon-Chretien*, and ſome others.

You ought here to call to mind that we have diſtinguiſht the Branches of Trees Into *Prodigals*, *Indifferent* and *Fertile*.

There are few Trees Grafted on cultivated Trees, and on Trees come of Kernels, which do not yield ſome *Prodigal* in the firſt Sap, and which do not continue eve to yield of them in the others. Care muſ be taken therefore to cut them at the ſecond Leaf-bud, and thus to correct the ſhoo which tranſports it ſelf, and which draw a great part of the Sap of the Tree. O this matter you may ſee the fourth Figure

As for Trees Grafted on the great Quince trees, they have not often of theſe ſorts o

Prodig

Prodigal ſhoots: and ſome Gardiners are ev'n of the mind that they ought not to be Lopt at this time, and that the tops of them ought only to be pincht off with the Nails.

We muſt not deal with the Indifferent Branches as with the Prodigal: for we ought to keep the beſt without touching them, and obſerve exactly thoſe which we permitted to run on in the Month of *February*. If theſe have good marks for proving Fertile, we muſt cut nothing there; but if they have not, they muſt be cut ſhort enough to make them yield ſome; that is to ſay, they muſt be cut at the fifth or ſixth knot for Leaves: As for the other *Indifferents*, we ought to cut them at half a foot, or ev'n a foots length, for rendring them Fertile the year following. The *Indifferents* which we muſt not cut, have particular marks which we have obſerv'd in the firſt Chapter.

We ought not to touch the Fertile Branches for the reaſons mentioned elſewhere, unleſs it be ſometimes thoſe which Iſſue from a Flower-bud which has fail'd.

Before I paſs farther, it will be proper for me to explain my ſelf on what I pretend to ſay by a Flower-bud which has fail'd; and you muſt give me leave to make two ſorts of Flower-buds. One ſort is certain and never ſhoots forth Wood: they are theſe which will yield Fruit in a ſhort time. The others ſhoot forth Wood when the Sap abounds too much, or when we cut a Tree too ſhort, and that by this means we draw the Sap too much toward theſe ſorts of Buds. They are theſe Buds which will not blow under two or three years. Their Origine, their ſituation, and their Figure make them eaſily diſtinguiſhable to a Gardiner which has experience and a good ſence. This being thus eſtabliſht, I may ſay that a Scion which ſhoots in a Fruit-bud which has fail'd, is ſituated in a good place for being called Fertile as I have ſaid it elſewhere; and that if the Sap of the Tree had not been ſo abundant, to make this Bud ſhoot which yielded the Scion, doubtleſs this Bud would have become the year following a Flower-bud; beſides the Fibres of the Bud being tranſverſe, cauſe the Sap to circulate more ſlowly, and during all this time the Sun concocts and digeſts the humour to form there Fruit-buds for Fruit.

I thought good to alledge all this, to ſhew the errour wherein ſome are, who will have us always to cut this Scion, ev'n when the Fruit has fail'd, and for this they call it a falſe and an ill ſhoot. But experience has taught me that it has marks of

Fertileneſs, and that two years, or at fartheſt three years afterward, if it were not cut away, it would furniſh it ſelf with Flower-buds; and would bear during ſix or ſeven years an infinite number of Fruit.

If therefore the Flower-bud which is on a little bearer, that has fail'd, which would yield Fruit the next year or two years after, ſhoots Wood; it ought to be cut ſhort in *June*, to make it form there Fruit-buds, which happens ſometimes otherwiſe through the abundance of the Sap; for a Scion or two form themſelves there as may be ſeen in the third Figure.

Nevertheleſs, there are ſome who will not have us to cut this Scion in *June*; they preſerve it for the Fruit, and cut it long in the Month of *February* following, or do not Lop them at all; and if there are two, they let the beſt grow, and cut the other an Eye or two from the Mother-Branch.

But however, I think we muſt here diſtinguiſh two ſorts of Scions which come in a Flower-bud which has fail'd. There are bearers and vigorous Buds, which ſhoot forth two or three Scions, whereof ſome are long and ſlender, others ſhort and ſlender, and others again ſhort and thick: We muſt not touch theſe laſt; becauſe moſt commonly a Flower-bud forms it ſelf there, and we muſt not always cut the others an Eye or two from the Mother-Branch: If ſome diſpoſition for a Flower-bud forms it ſelf near the Scion, cut within an Eye or two of the Mother-Branch, we muſt accept of it from the liberal hand of Nature; if none be form'd there, and that another Scion grows there, they muſt be left for the Months of *July* or *February* following. If the Bud which produces the Scion, be weak, we muſt not touch it, but we muſt preſerve the Scion for the Fruit, at leaſt if it appears well furniſht with Sap in *Auguſt*; for if we cut it, it will be at a ſtand and will not ſhoot.

We muſt cut larger in *June* than in *February*; becauſe it is at that time that we give the Figure to the Tree for the year following, and that we cauſe Fruit-buds to be form'd for two years after.

If Grafts within a cleft made in the top of a Stock, are vigorous the year that they are Grafted, it is better (as ſome think) to pinch the ends of them away with the Nails at the beginning of *June*, than to cut them. But experience has taught me that if we deſign a Graft which ſhoots vigorouſly either for a Buſh head or for an *Eſpalier*, we ought to cut it at the New of the Moon, three or four Months after it is Grafted, to make it ſpread below, and to ſecure it from the Wind: We gain a year by ſo doing.

As for Trees which we deſign to let run up to a height it will be good not to cut them at all till the ſecond year.

We muſt not touch the firſt year a Bud Grafted, be it never ſo vigorous; we muſt wait the year following to cut the Stump of the Tree come of Seed, mean while care muſt be taken to ſtay it up againſt the Wind.

I repeat it once again here, that we ought never to cut Flower-buds, becauſe we take away the Buds which bring a great deal of Fruit during ſix or ſeven years following. When the little Branches, where the Buds are fixt, are fortified by the hardneſs of the Tree, it is then that we muſt no longer cut off with Sheers, neither Flowers nor Pears.

There are ſome who ſay, that we ought to cut Apricock, Nectarin and Peach-trees, four or five times a year, to wit, in *February*, in *May*, in *June*, and in *July*: but Experience has taught me, as well as Father *Feüillant*, who has writ of Fruit-trees, that theſe ſorts of Trees do not much love the knife; otherwiſe, they do not laſt long, and we deſtroy them in the end, by much cutting them: We are oblig'd in this Month to nale them up, and to cut at the ſame time the Branches which cannot be apply'd to the Eſpalier. Some preſerve them to be cut in the Month of *February*, according to the Maxim that theſe ſorts of Trees, being very nice, do not love to be cut, or rather, they pull away with the Finger the Branches, as faſt as they come againſt order, and in an Irregular place.

After the firſt Lopping of *February*, I am not of opinion that we ought to cut any thing from Apple-trees, or Plum-trees, or Cherry-trees, or Goosberry-trees, or Portugal Quince-trees, or Spaniſh Pomegranate-trees, unleſs we take from theſe two laſt Trees ſome *Prodigals*, which ordinaly grow there, and which do not fill, nor embelliſh the Tree.

Tho' I reſolv'd to ſpeak here but of Lopping Trees, neverthleſs it may be allow'd me to ſay ſomewhat curious concerning their watering, which contributes much to the abundance and greatneſs of their Fruit.

It will be proper in the Evening at Sun ſet, during the great heats of the Summer to ſprinkle with Water ſometimes the Branches and the Fruit of Trees with a *Dutch* Pump. The Tree will be greener, and the Fruit better ſupply'd with nouriſhment: it is far better to do ſo than to Water them at the Root; for this laſt watering renders Pears unſavory, and of an ill taſte, whereas the firſt, anſwering to an Evening Rain, or the due of the Night, keeps the Tree ſupply'd with nouriſhment, which afterwards gives its Fruit the Juice, which is meat for them, for rendring them good and delicious.

For this we ought to Obſerve that the Water which we will make uſe of, ought to be drawn in the Morning, and to have been a little expos'd to the Sun, ſo that it ſhould not be cold in the Evening when we would uſe it : Moreover that the Pump has three or four little holes, that it may make the Water which iſſues from it to divide it ſelf into a Thouſand little drops. Finally, that we ought to place our ſelves at fifteen or twenty Foot from the Tree which we will Water.

CHAP. IV.

The Lopping of Fruit-trees at the end of July.

WE ſaid in the foregoing Chapter, that the ſecond Sap or ſhoot began in the middle of *June*, and ended at the end of *July*; and we ſay at preſent, that the third manifeſts it ſelf in the Month of *Auguſt*, and ſometimes in the Month of *September* according to the diſpoſition of the Air, and the difference of the ſeaſons: ſo that it is at the end of the ſecond Sap that we ought to meddle with Trees; for in the Month of *Auguſt* we muſt take good heed not to cut any thing there, and if we cut then any Branch, the Wound does not cicatrize it ſelf all the year, the heat drys it, and the approaching Winter incommodes it with the exceſs of its Rains and colds.

This Lopping is not performed but to cauſe the Branches to be fortified, to make the Flower-buds to fill themſelves, and to cauſe the Fruit to be nouriſht the more.

If we ought to be ſcrupulous in the Month of *June* to Lop Trees, we ought to be ſo for a much greater reaſon this Month, for at preſent we muſt but pinch away with the nails the ends of, or cut a little ſome Branches.

We muſt chooſe then in *July* a fine day and the decreaſe of the Moon to viſit the Trees: and we muſt call to mind the diviſion which we have made of the Branches of Trees.

We muſt Lop again at the ſecond knot the Prodigals a third time, if they have ſhot vigorouſly, that we may wound ſo often the Branch which receives much of Sap, that its divers Wounds may weaken it, and divert by this means the Sap to other places, that it may be divided into many Branches. Theſe Prodigals come not much but in Trees Grafted on the Pear-tree; and Planted in a good Soil, as I have ſaid: and ſo we muſt not ſeek for them elſewhere, for thoſe which are Grafted on the great Quince-tree do not ſhoot much: and in this Month we ought to cut nothing in theſe laſt ſorts of Trees.

In this Month we muſt not touch the Indifferent Branches, which we judg'd to be ſo in the Months of *February* and of *June*, we muſt ſtay till the Month of *February* following to Lop them, if they ought to be Lopt.

Neither muſt we touch of thoſe which are Fertile : but concerning thoſe which iſſue from a Flower-bud which has faild, there are differing ſentiments. The ſhoot which iſſues from this Bud having been cut at the ſecond knot in the Month of *June*, ſhoots ſometimes at the ſecond Sap, and yields one or two Scions. Some will have it that we ſhould cut theſe alſo at the ſecond knot : becauſe they pretend that Nature ought to form there ſome diſpoſition to make Buds. Others Lop at the ſecond Eye the leaſt, and preſerve the faireſt and beſt fed and knotted, to ſee in *February* following if it will ſhew its Genius, and at that time they leave it all entire, becauſe it comes from a Fertile place, or cut it very long. They have obſerv'd by experience that three years afterwards it brings a great many Buds, whence iſſue an infinite number of Fruit.

If in this Month there are found ſome uſeleſs Branches beſides, they muſt be cut an Eye or two from the Mother-Branch, to make them ſhoot forth ſomewhat that is good.

There come often on Peach and Nectarin-trees, and ſometimes on Pear-trees a cluſter of Branches, which happens often to Trees grown old, and fit to be cut for renewing themſelves. We muſt do at this time as we did in the *February* before: that is to ſay, we muſt make choice of the Maſter Sprig to preſerve it, and cut away the others. Nevertheleſs there are ſome who ſtay till the Month of *February* enſuing to do this, becauſe that in *July* the heat penetrates to the quick into the Wounds of nice Trees; and beſides that which Trees ſhoot after this ſeaſon ought not to be preſerv'd. They cut therefore Trees at this time the leaſt they can, relying doubtleſs on experience which has obliged them ſo to do.

Toward Magdelan-tide, in the Decreaſe of the Moon, which happens in the Month of *July*, we muſt nail up again Peach-trees, Nectarin-trees, *&c.* and we muſt cut all the Branches which are not flexible, and which are grown contrary to Order, tho' with this diligence, that we muſt cover as ſoon as may be with a Plaiſter, and paper the Wounds which have been there made.

Thoſe who are for the laſting of theſe Trees, pale them up at this time, but they ſtay to cut them till the Month of *February*; theſe ſorts of Trees (according to their ſentiment) being ſo nice, that they cannot endure the Summer, the great heat penetrating into their Wounds, cauſes five or ſix Eyes to dye. Which we perceive dryed the year following:

this is the way (ſay they) to make them laſt forty years, as experience ſhews it. They choſe much rather (as I have ſaid) to pull away with the Finger, as they walk, the Branches which come contrary to order, than to cut them, and if there are found ſome which ought to be cut, they keep them for the Month of *February* following. Nevertheleſs, if they are too much confus'd, and that their ſhaddow hinders the Sun from heating the Fruit, we ſhall be oblig'd to cut them away.

The abundance of Pears being ordinarily the Enemy of Eſpaliers, and making the Trees often dye, we muſt cut with Sheers the middle of the ſtalk of the Pears, to disburthen the Trees. This ought to be done when the Fruit is a quarter or a third part as big as it ought. This Rule is only for great Winter-Fruit, and chiefly for the *Bon-Chretien*: we muſt obſerve alſo not to leave above one or two Pears on a weak Branch, a ſtrong one being able to bear more.

Its alſo in this Month that Fruit enter into Juice, and begin to take a colour through the light of the Sun: but becauſe often there are Leaves, which hinder the rayes from touching the Fruit, care muſt be taken in *July* to take away ſome from before them, and in the Month of *Auguſt* following we muſt cut away the reſt with Sheers, ſo managing the Light by reaſon of the burning heat of the Sun.

End of the Firſt Tract.

---

this is the way (ſay they) to make them laſt forty years, as experience ſhews it. They choſe much rather (as I have ſaid) to pull away with the Finger, as they walk, the Branches which come contrary to order, than to cut them, and if there are found ſome which ought to be cut, they keep them for the Month of *February* following. Nevertheleſs, if they are too much confus'd, and that their ſhaddow hinders the Sun from heating the Fruit, we ſhall be oblig'd to cut them away.

The abundance of Pears being ordinarily the Enemy of Eſpaliers, and making the Trees often dye, we muſt cut with Sheers the middle of the ſtalk of the Pears, to disburthen the Trees. This ought to be done when the Fruit is a quarter or a third part as big as it ought. This Rule is only for great Winter-Fruit, and chiefly for the *Bon-Chretien*: we muſt obſerve alſo not to leave above one or two Pears on a weak Branch, a ſtrong one being able to bear more.

Its alſo in this Month that Fruit enter into Juice, and begin to take a colour through the light of the Sun: but becauſe often there are Leaves, which hinder the rayes from touching the Fruit, care muſt be taken in *July* to take away ſome from before them, and in the Month of *Auguſt* following we muſt cut away the reſt with Sheers, ſo managing the Light by reaſon of the burning heat of the Sun.

End of the Firſt Tract.

An Explanation of ſome words which Gardiners make uſe of to expreſs themſelves in ſpeaking of Fruit-Trees.

CAnker, or *Scab* is often caus'd by the heat of the Sun, or through the taint of the Tree which is in an ill Soil,

Eſpalier, is an edge row of Fruit-trees ſet cloſe together, their Boughs interlac'd one within another, and held with Stakes, Railes, or Pales.

Falſe Shoots, are little uſeleſs Branches, or Sprouts of the ſhoot of *Auguſt*, turning yellowiſh, and ill ſupply'd with Juice.

Franc, is ſaid of Fruit, when they are cultivated and domeſtick, or of a Tree Grafted, or laſtly of a young Tree come of a Kernel, Sown, which has no thorns, and which has large Leaves, for there are excellent Fruit which come of Seed ſo Sown. We ſay to Graft a *Franc* on a *Franc*, Coin *Franc*.

Fertile, Fertile ſhoots are the Branches which always bear Fruit.

Indifferents, are Sprouts which ſometimes yield Fruit within three or four years A knot is the place where a Tree ſhoots forth Wood.

Prodigal or *Ravenous*, are great and ſmooth ſhoots, which draw the Sap of the Tree, and which bring not Fruit in a long time; they diſſipate all the ſubſtance of their Mother.

Sap, is taken for the humour which riſes betwixt the Wood and the great Bark, by the little Bark which is betwixt both, it anſwers to the Blood of Animals: It is Roſin in the Pine-tree, Turpentine in the Larch-tree, Gum in the Apricock and Cherry-trees, Milk in the Fig-tree, Water in the Vine and in the Pear-tree.

Scion, is a little Fertile Branch.

Void ſpaces, when there are no Branches to fill out the Eſpalier.

Worms call'd *Tygres*, *Lutins*, *Diablotins*, are thoſe Worms which come in the Month of *Auguſt* and gnaw the Leaves of Trees; they have the Head great and black; the vapour of Quick Lime, or the decoction of Wormwood kills them.

The Second PART.

Of the uſe of the Fruits of Trees, for preſerving us in Health, or for Curing us when we are Sick.

IT is not enough for us to have Writ concerning the Lopping of Trees, to have Fruit in abundance, we muſt alſo teach the way and the time of eating them without being offended thereby.

If our Stomach were as good as that of our Fore-fathers, it would be uſeleſs for us to Write on this matter; but becauſe it is weakn'd by the pleaſures which men of late have taken in their way of living, there ſeems an Obligation upon us to give precepts concerning the uſe of Fruits, either for preſerving us in Health, or for deſtroying our Diſeaſes when we are afflicted with them.

There is nothing ſo uſefull in Phyſick, as to know the qualities of things which we make uſe of in Life, either for avoiding thoſe which offend us, or for taking thoſe which do us good: it is what has oblig'd Learned men to deliver their ſentiments concerning all that we eat, they making uſe always of Reaſon and experience, which we ſhall alſo follow in this Tract of *The uſe of Fruits of Trees*: for it is only of thoſe whereof we deſign to ſpeak.

We ſhall make therefore three different Chapters: We ſhall ſhew in the Firſt the time and the way of uſing thoſe Fruits which are eaſily corrupted, as *Figgs*, *Nectarins*, *Peaches*, *Plums*, *Apricocks*, *Mulberries*, and *Cherries*, which we ought always to eat faſting, on an empty Stomach, and before Meals.

The ſecond ſhall Treat of thoſe which are not eaſily corrupted, and which we ought to eat the laſt thing after Meals, as *Pears*, *Apples*, *Portugal Quinces*, *Medlars*, and *Services*.

Laſtly, the third ſhall explain how we may eat before or after Meals *Raiſins*, *Portugal and China Oranges*, *Spaniſh Pomegranates*, and *Corands*. But before I enter upon this matter, I think fit to lay down ſome general Maxims, without which we cannot know the good uſe which we ought to make of Fruits.

We ought then in the firſt place to obſerve all the qualities of the Fruits before mention'd, tion'd, that we may uſe the one and the others at divers times, according to the precepts which we ſhall give in the Sequel.

We find of Sweet, of Sugar'd, of Amber'd, of Musked, of Vinous, of Aqueous or Inſipid, of Sharp, of Acerb, and of Auſtere, and to ſpeak in a few words, there are of ſweet, ſharp, and auſtere.

There are found moreover of Red, of Yellow, of Green, of Tawny, of Violet, of White and of Black.

Again there are of *Caſſans* or harſh, of *Burez*, of Fondans or melting and tender; finally we find ſuch as paſs quickly through the Bowels of thoſe that eat them, and theſe are the Fruits which are eaſily corrupted: there are others which ſtay a long time in the Stomach, and they are thoſe which are corrupted with difficulty.

All the Fruits whereof we deſign to ſpeak in particular, cool and moiſten much, becauſe they are but Water gathered together, and paſſed through the Trunk of the Tree, which produces them; but nevertheleſs with this difference, that there are ſome colder and moiſter than others.

Fruit that have a quality which is ſweet, and pleaſant to the taſte, are leſs cold than others: thus, tho' Figgs, Raiſins, the *Bon-Chrêtien*, the Spaniſh Renet, and other Fruit of the like nature, moiſten much, they have nevertheleſs but a coldneſs, which does not paſs the bounds of the firſt degree, its for this reaſon that they dulcifie much, and that they nouriſh a little more than the others, their matter having more affinity with our parts. But if with their natural ſweetneſs they have an odour of Amber or of Musk, then they have I know not what ſubtle and penetrating parts, which exhilerate our Heart and Brain, and which make us digeſt them better than others.

Sharp Fruit cool more than ſweet: but they do not moiſten ſo much, they powerfully penetrate and attenuate the thick and earthy matters, ſo that afterward they are no longer capable of doing us hurt. They qualifie our heated Bowels; they deſtroy the Flame there, which often all the remedies of Phyſick have not been able to quench during many Months: they cool our Liver, remove all the Obſtructions of our Bowels, and give our Blood a more free motion: finally they appeaſe fluxions, if we apply them outwardly, and they ſtay a Flux of Blood from whatever part it comes.

Fruits which are auſtere and acerb, and which differ but in more or leſs, reſtringe the Tongue and the Palate when we eat them: it ſeems that they ſtop the Orifices of the threads that terminate there, by the blunted and obtuſe particles of their matter.

tion'd, that we may uſe the one and the others at divers times, according to the precepts which we ſhall give in the Sequel.

We find of Sweet, of Sugar'd, of Amber'd, of Musked, of Vinous, of Aqueous or Inſipid, of Sharp, of Acerb, and of Auſtere, and to ſpeak in a few words, there are of ſweet, ſharp, and auſtere.

There are found moreover of Red, of Yellow, of Green, of Tawny, of Violet, of White and of Black.

Again there are of *Caſſans* or harſh, of *Burez*, of Fondans or melting and tender; finally we find ſuch as paſs quickly through the Bowels of thoſe that eat them, and theſe are the Fruits which are eaſily corrupted: there are others which ſtay a long time in the Stomach, and they are thoſe which are corrupted with difficulty.

All the Fruits whereof we deſign to ſpeak in particular, cool and moiſten much, becauſe they are but Water gathered together, and paſſed through the Trunk of the Tree, which produces them; but nevertheleſs with this difference, that there are ſome colder and moiſter than others.

Fruit that have a quality which is ſweet, and pleaſant to the taſte, are leſs cold than others: thus, tho' Figgs, Raiſins, the *Bon-Chrêtien*, the Spaniſh Renet, and other Fruit of the like nature, moiſten much, they have nevertheleſs but a coldneſs, which does not paſs the bounds of the firſt degree, its for this reaſon that they dulcifie much, and that they nouriſh a little more than the others, their matter having more affinity with our parts. But if with their natural ſweetneſs they have an odour of Amber or of Musk, then they have I know not what ſubtle and penetrating parts, which exhilerate our Heart and Brain, and which make us digeſt them better than others.

Sharp Fruit cool more than ſweet: but they do not moiſten ſo much, they powerfully penetrate and attenuate the thick and earthy matters, ſo that afterward they are no longer capable of doing us hurt. They qualifie our heated Bowels; they deſtroy the Flame there, which often all the remedies of Phyſick have not been able to quench during many Months: they cool our Liver, remove all the Obſtructions of our Bowels, and give our Blood a more free motion: finally they appeaſe fluxions, if we apply them outwardly, and they ſtay a Flux of Blood from whatever part it comes.

Fruits which are auſtere and acerb, and which differ but in more or leſs, reſtringe the Tongue and the Palate when we eat them: it ſeems that they ſtop the Orifices of the threads that terminate there, by the blunted and obtuſe particles of their matter.

I do not pretend to ſpeak here of Fruit which are not Ripe, that have all theſe qualities. I baniſh them entirely from this Book as very pernicious to the Life of Man; but I ſpeak only of thoſe, which being in a perfect maturity, retain ſomewhat of auſtere, acerb, or aſtringent, as the Rake Pear, the great Dégue, the Quince, and other Fruits of the like Nature. All theſe Fruits are alſo more cold than the ſweet and the Amb'red, but they do not moiſten ſo much: and becauſe their ſavour is in a more Earthy matter, ev'n in this reſpect they do not penetrate ſo much as the Sharp. They reſtring however the Stomach and the Bowels, and withſtand a Looſneſs and a *Diſſentery*, and being apply'd outwardly they hinder Vomiting, retard growing Inflammations, and eaſily cicatrize the Skin, which has been open'd by a conſiderable Wound.

After all, a Fruit which has been brought to perfection by the heat of the Sun, and which has not been ſhadowed by the Leaves of its Tree, will be always of better taſte than another. A red Apple or Pear, and a yellow Raiſin will always be better than others; becauſe their Juice will be better digeſted, and their uſeleſs moiſture will be eaſily evaporated by the heat of the Sun.

You muſt obſerve in the ſecond place,

that I give not here precepts concerning the uſe of Fruits, for ſound and robuſt Perſons, on whom Fruits make no Impreſſion; Let ſuch eat of them at all times, and as much as they pleaſe, without diſtinguiſhing their Nature and Temperament, they will not find any inconvenience: but becauſe theſe ſorts of Perſons are very rare, and that in the Age we Live, there are more Valetudinarians than others, I may be allow'd to Write only for thoſe who have their Entrals tender, and who are often incommoded by eating Fruits.

The greateſt part of men at preſent are of a hot and dry Complexion; we have all of us the inward parts very hot, through the exceſs of a burnt Choler, and through the redundancy of a troubled Melancholy. With difficulty are we able during the Summer to ſupport the heat of the Seaſon, without being exhauſted of our ſtrength: We have the Stomach ſo weak and ſo tender through our natural diſtemperature, that we have need of much precaution for the good uſe of Fruits.

In the third place, we muſt remember, that in walking in a Garden full of excellent Fruit, which are perfectly Ripe; we muſt not eat one which has not firſt been waſht with freſh Water, and eſpecially if the heat of the Sun, or of the day be exceſſive.

It is not of to day that experience has taught me, that Fruit newly gather'd, and eaten without precaution, cauſe the Fevers which we call putrid, which always begin with ſhiverings and tremblings, becauſe all the Juices of Fruits being then through the heat of the day, and of the Seaſon in a conſiderable motion, they cauſe in our Stomach ſo great a diſorder at the time that the fermentation is there made, that the Chyle becoming crude and undigeſted, often gives Birth to great Diſeaſes, whereas the motion of the Juice of Fruits being calm'd by the cold of the Water, of the Night or of the ſeaſon, the Fruits make no diſorder in our Stomach, which then digeſts them better, and which performs its Office much better, when it is not interrupted by unuſual cauſes.

After all, we ought to know that our food being in ſome ſort like our ſubſtance, changes it ſelf eaſily within our parts imperceptibly to us: Its thus that Bread, Fleſh, an Egg, have no Predominant quality when we put them into our Mouth, and we do not ſenſibly feel the Vertues when we have them in the Stomach. We muſt not ſay ſo of Aliments which we call medicamental; they nouriſh little, and on the other ſide they have ſenſible qualities, which affect our Tongue and our Palate. We may perceive that a *Vertelongue*, or a *Pear Portail* will cool and moiſten our heated Stomach, that it will qualifie the Gall of our Liver, and the heat of our Reins, and that by cooling this laſt part, it will hinder Stones from being form'd there.

Finally, its a grand ſecret for our good Health, to keep what we eat, from corrupting in the Stomach. The things of a different Nature which we put into it, daily cauſe diſorders, whereof our ſelves are too often Witneſſes; if experience did not convince us of this truth, there would doubtleſs be a great deal of pleaſure in eating many things one after the other; but it ſhews us that eating before or after Meals Fruits of a different Nature, that is to ſay, ſuch as are eaſily corrupted, as Peaches, *&c.* and ſuch as have a more firm ſubſtance, as Pears, *&c.* The Coction which is made in the Stomach is not laudable, and that it is thence that often proceeds the little Health of thoſe who over looſly indulge themſelves to the pleaſure of the taſte.

If therefore we eat at the end of Meals Peaches and Pears, as it often happens, the Peaches being of a ſubſtance to be ſoon digeſted, and to paſs off quickly, and the Pears of a pretty firm matter, requiring more time to Concoct, two great inconveniencies follow; the firſt, that the Peaches trouble the Belly, and make the Food taken at the Meal to deſcend, without being fully digeſted: the ſecond, that they haſtily drag along with them the Pears, which require a longer time for digeſtion, and thus there comes of it but crudities, and afterward obſtructions, which are the cauſe of ſome troubleſome Diſeaſe.

It is not the ſame when we eat before Meals Mulberries and Peaches, or after Meals Pears and Quinces; the two firſt Fruits and the two laſt have a matter and qualities near alike: the former paſs quickly through the Belly by reaſon of their great humidity: and the later digeſt themſelves afterward at leaſure, by conſtringing after the Meal the ſuperior Orifice of the Stomach, which by this means acquits it ſelf much better of its office.

CHAP. I.

Of Fruits which ought to be eaten before Meals.

I Say in the firſt place that good Fruit which are Ripe, never do hurt, unleſs we miſuſe them, or commit faults in eating them; there are none but ill and unripe Fruit which cauſe Crudities, Indigeſtions, Colicks, and Fevers. I ſay much more; experience daily teaches us, that by the moderate uſe of them we prevent an infinite number of Diſeaſes, and that we Cure as many. Our Gardens fail not of Remedies to relieve us, and I wonder we go ſo far into Forrein Countrys to ſeek for Drogues, which are muſty or rotten, when they are brought to us, ſince we have ſo excellent at home. Our Fruits have many more Vertues and Charms than all thoſe Drogues, and there are ſeen few Perſons who refuſe Peaches, Mulberrys, or Pears, to appeaſe the burning of the Bowels; Whereas we daily ſee Perſons have in horror *Tamarinds*, *Caſſia*, *Rhubarb*, and the other Drogues which are brought us from ſo far.

Becauſe I am oblig'd to follow the Order which I have preſcribed to my ſelf, I ſhall treat in this Chapter of the good uſe of thoſe Fruits which ought to be eaten at Break-faſt, or before Meals: and I ſhall begin with Figgs, which among all Fruits have always been the moſt eſteem'd.

ART. I.

Of Figgs.

AMong all the Food wherewith Men nouriſh'd themſelves at the beginning of the World, there is not one which deſerves a greater praiſe than Figgs. The Ancients have made Encomiums on them in many of their Books; and the *Lacedemonians* ſo far eſteem'd them, that they would never go to any Feaſt where they were not provided in a great plenty. Alſo ſome have compar'd them to Gold, nay have eſteem'd them far better than this Mettal. Its doubtleſs by reaſon of their ſugary ſweeteſs, which is the Symbol of peace, that men formerly wiſht their Friends a happy year, by ſending them at the beginning of it Figgs and Honey.

In truth, they have admirable Vertues in Caſe they are eaten with Bread, for Break-faſt, or before Meals. For it is thus that they qualifie the Bowels, and that they appeaſe the exceſs of a troubleſome heat. They do not fail of producing other good effects, they quench drought, lenify the Breaſt, and give a more eaſy reſpiration. They clear the Liver and the Spleen of the Obſtructious wherewith they are afflicted. They diſcharge the Reins and the Bladder of their ſlime and Gravel: They looſen the Belly, be it never ſo tardy: finally they nouriſh and fatten both together, witneſs the famous Wraſtlers, who perform'd moſt couragiouſly, when they liv'd but of Bread and Figgs. Witneſs alſo the Keepers of Figg-Gardens, who (according to the Relation of *Galen*) ate in a manner nought but Figgs, and who in the mean while were ſo fat, that a man would have ſaid that nothing was wanting to them in their way of living.

Figgs alſo have this peculiar to them, that they contribute to the vigour of young People, and to the Health of ſuch as are Old, ſo that thoſe who uſe of them often, have no Wrinkles in their Face. A better Reaſon cannot be given than that Figgs, by their fat ſubſtance engender a Blood which dulcifies much, and this ſame matter being carried to the ſuperficies of the Body is there clear'd as well as the Blood of all its ſerous and ſuperfluous excrements, ſo that what remains ſerves as a natural Paint, and renders the Face ſmooth, and free from all ſorts of Wrinkles.

After all, they have the property of Penetrating, Cleanſing and Digeſting; for no man doubts but they are hot in the firſt degree, and moiſt in the ſecond; the great humidity they have make them ſoon corrupt, and obliges us to eat them with Bread before Meals; for its the Leaven of the Bread which corrects all the ill qualities.

Its a Maxim among Phyſicians, That we ought always to begin with the things that are moiſteſt and eaſieſt of digeſtion, when we Dine, or when we Sup. And this is alſo another, That after Fruits that are Sweet and Luſcious, and which withall paſs quickly through the Belly, we ought rather to Drink pure Water, or Water mixt with a little Wine, than Wine alone. Pure Wine carrys haſtily into the Lacteal Veins the matter of the Figgs before it be digeſted, and ſo cauſes winds, and

Indigeſtions in thoſe who ſo do : Whereas Water is the cauſe of a ſlower fermentation, by the means of which the Figgs are perfectly digeſted and make afterward a very laudable Blood, which eaſily becomes our ſubſtance.

They are not proper only for ſuch as are in Health, but likewiſe for thoſe who have a Fever and are coſtive, and I cannot imagine to my ſelf that a Learned Phyſitian can refuſe his Patient a Figg half dryed on the Tree by the heat of the Sun.

Dry Figgs have much more Vertue than thoſe which we gather ; we may eat of them ev'n after Meals, without offence ; alſo they are more penetrating and hotter than the others through the ſubtilty of their parts, but they are not ſo moiſt. If they are apply'd in the form of a Cataplaſm with Bread and a little Vinegar, haply they are the quickeſt and moſt certain remedy for opening an abſceſs, for killing a Carbuncle, or the ſwelling of the Kings-Evil, or laſtly to withſtand the progreſs of a Latent Cancer.

They do much more, if we will believe *Dioſcorides*, for they tear from the Fleſh (as we may ſay) a piece of a Bone broken, if we mix them with wild Popy Flowers.

The German Phyſicians have not found a better remedy in the Small-pox, or Meaſles than the decoction of theſe Fruits dry ;

dry; experience has ſhewn them that this decoction, by Purging by Urine, carrys away all the Malignant ſeroſity which is the cauſe of thoſe troubleſome Diſeaſes.

But among all the good qualities which theſe Fruits enjoy, there are obſerv'd ſome ill: they cauſe Winds which ſwell the Stomach; they breed Lice, and makes us fond in careſſing Women.

The Spirits irritated and ſet in motion by the Winds which they engender, and a viſcous humidity which they cauſe, are two things which diſpoſe us to be fond of a Woman, as we have prov'd at larg in a Diſſertation we caus'd to be Printed the laſt year; which has for Title, *Whether thoſe who Drink Water alone are more amorous than others?*

The Lice which they ſay Figgs breed in thoſe who uſe them in exceſs, proceed but from the filth of the Skin, and from our excrements which they evacuate by the pores: and the evils they cauſe in us by the Winds they engender, proceed but from the ill uſe we make of them; if we eat them with Nuts or Almonds, we ſhall correct all the diſorders they can bring us; and I can aſſure you that being ſo eaten, they will be without fault, and will do us no hurt, ſtill provided that we uſe them with moderation.

A R T. II.

Of Nectarins and Peaches.

I Cannot bear the contempt ſome Perſons have for *Nectarins*, *Alberges*, *Brugnons*, *Melicotonys*, *Perſes* and *Peaches*, nor be ſatisfied with the reaſon they bring for blaming them. They ſay among other things that theſe Fruits are corrupted ſo eaſily in the Stomach, that it is almoſt impoſſible to ſecure them from it; that they produce ill Blood, that they cauſe Fevers; that they injure the inward parts; that the *Perſians*, from whoſe Country they were brought, dare not eat of them by reaſon of their Malignity, and finally that *Galen*, the moſt knowing of the Greek Phyſitians, always condemn'd them.

But if it were free for me to explain my ſelf at large thereon, and to break off the deſign which I propos'd to my ſelf; I would ſhew that the ill uſe which is made of the moſt excellent things, is often the cauſe that they are deſpis'd and blam'd.

Peaches, not to ſpeak of the other kinds, are a Fruit ſo excellent and ſo delicious to the taſte, that I could freely prefer them before Figgs and Raiſins, which (according to the ſentiment of ſome) ought to hold the firſt rank among Fruits.

Very far from cauſing all the evils whereof they are accus'd, they cool the Stomach when heated, quench the heat of the Liver, allay the burning of the Blood during the extremity of the Summer heats, and moiſten the matter which is then very thick through the drought of the Seaſon.

If we obſerve well their præcautions, they do not corrupt in the Stomach, provided that they are eaten before Meals, and that after having eaten them we drink only Water, if we find a burning in the Bowels; or excellent Wine, if we find our ſelves to have a very moderate heat; It is then that they will engender a better Blood than the Herbs we uſe every day.

I own that in *Perſia* theſe ſorts of Fruits have Malignant and purgative qualities, but ſince the Trees were tranſported into *Ægypt*, and have been re-planted in *Italy*, and ſince cultivated in *France*, they have loſt all the Malignity which they had, and have retain'd but the purgative Vertue, which they have ſtill, and which they Communicate to their Fruit.

Its this purgative Vertue which cauſes them to be ſo much eſteem'd of by the Healthy and Valetudinarians, who had much rather eat faſting four or five excellent Peaches, and drink after them Water or Wine, to looſen the Belly; than to take a doſe of Phyſick, the very name of which raiſes a horrour in thoſe that take it the moſt couragiouſly.

Its this ſame property which reſides in the Leaves, the Flowers and the Fruit of the Peach-tree, which kills the Worms in the Bowels, which Purges Choler and the Seroſities of the Body, and ſtops ev'n Vomitings at Sea, as we ſee written in the Works of *Julius* of *Alexandria.*

If *Galen* had Liv'd in our days, and had taſted Peaches, which the Art and Induſtry of our Gardiners have rendred ſo recommendable, I am certain he would have had quite another opinion of theſe ſorts of Fruit: the Peaches which were carryed to *Rome* in the Time of this Phyſitian, coming by Sea from *Sicily* or from about *Naples*, were partly rotted before they came thither, which made *Galen* at that time to deſpiſe them, and to condemn them ev'n as a Food very pernicious for Man.

Some Perſons will correct the ill quality, and the great humidity of the Peach, by eating it with Bread, by expoſing it two or three days to the ſcorching heat of the Sun, by eating its Kernel, or finally by drinking pure Wine with it.

True it is, experience has taught me, that Bread eaten with Fruits which we ought to uſe before Meals, corrects their ill qualities, and that by expoſing Peaches to the Sun, they loſe a ſuperfluous humidity which often incommodes us. But the ſame experience has alſo given me to underſtand, that Peach and Apricock Kernels much charge the Stomach, and that beſides their great bitterneſs they are alſo very difficult to digeſt: that moreover, tho' pure Wine be the ſole thing which oppoſes it ſelf to the coldneſs, and humidity of this Fruit; nevertheleſs if we drink much of ſuch as is ſmall or of a mean ſtrength, we fall into Vomitings and Looſneſſes, which ſometimes degenerate into a Bloody-Flux. Whereas a little of excellent pure Wine corrects by its noble heat the ill qualities of the Peach: Its haply this experiment which gave occaſion for this Latine Verſe.

Petre, quid eſt Peſcha? Cum vino nobilis
Eſca.

A R T. III.

Of Plums and Apricocks.

THere are ſome who prefer the Plum before all other Fruits with Stones, and ſay that there is nothing more delicious to eat than a *Black Damſon*, a *Great Date*, or a *Perdrigon*. The Apricock does not come near them, it has I know not what of unſavory when it is ripe, and of ſharpiſh when it is not ſo; mean while, both have very near the ſame qualities; they are both hot in the mean, and moiſt in the ſecond Degree.

The ſweet Plum rejoyces a hot Stomach, lenifies the Breaſt, Looſen's the Belly, and nouriſhes much more than the Peach, provided however that it be eaten before Meals, otherwiſe it corrupts, and by moiſtning too much the ſuperiour Orifice of the Stomach after Meals, it makes the Food deſcend too ſoon, and ſo cauſes Crudities, which it is difficult afterward to deal with.

I ſhall not repeat here the different Maxims which I have laid down in the precedent Diſcourſes concerning the Uſe of Fruits, which ought to be eaten faſting, and before Meals. I ſhall only ſay that its good to caſt Plums into freſh Water before they are eaten, to the end they may cool and moiſten more ; but provided that they are very ripe, and that all have their Stems, leſt the Water enter there, and render them Inſipid. Its doubtleſs in order to be more cooled, and more moiſtn'd, and to keep the Belly more ſoluble that ſome Men eat often Prunes with their Meat, and that there are ev'n ſome who diſlike their Pottage if it has not of them.

If dry'd Plums may be given to ſick Perſons, I do not doubt alſo but I may be permitted to give of them to mine, after having gather'd them very ripe in a clear day ; the Choler which is often the cauſe of all Fevers, looſes its edg by the cumbrance which it receives from the ſubſtance of Plums : and becauſe theſe Fruits oppoſe the heat and drought of theſe Diſeaſes, they are eſteem'd excellent for encountring *Bilous* Fevers, provided that the uſe be regular, and that we take a ſeaſonable time to give them.

A R T. IV.

Of Mulberries.

OF all the Fruits that are eaten there are none but Mulberries which are fit for Men when unripe: theſe ought only to be Red, drawing toward the Black, to be eaten. If they are throughly ripe, they corrupt ſo haſtily in the Stomach, that ſhortly after they cauſe in thoſe who eat freely of them, Diſtempers of the Stomach, Looſneſſes, Carbuncles, Malignant Swellings, and often pernicious and Epidemick Diſeaſes, eſpecially if Rains have been riſe during the Summer.

There is nothing which changes it ſelf ſooner into Choler, and which becomes ſooner poyſon within our Body than a Black Mulberry. Thoſe who have the Stomach foul ought to take good heed of eating them, unleſs they have a mind to be ſick in a ſhort time. The Red-blacks withſtand Corruption more, and tho' they are very moiſt, they have nevertheleſs I know not what of drought through their ſharpneſs and aſtriction, which hinders them from corrupting ſo ſoon.

To uſe them well, we ought nevertheleſs to mind the præcautions belonging to them, and never to eat of them but when the Stomach is empty, clean, and hot; for if a heat be not felt in the Bowels, how young and Cholerick ſoever a Perſon be, I do not adviſe him to eat of them, unleſs he has a mind to fall into ſome one of the Diſeaſes which we have ſpoken of before.

Mulberries carry their Liquor with them, and nothing ought to be Drank after they are eaten; they excite the appetite, cool the Stomach, appeaſe drought, allay the heat of the Liver, Purge the Blood of its ſuperfluous ſeroſities, carrying them off by Urine. They blunt the edg of the Choler, moiſten thoſe that are troubled with Melancholy and Choler: finally they make the Belly ſoluble in thoſe who are naturally Coſtive. I will ſay much more, if Mulberries gather'd from the Tree and eaten in a good plenty can cauſe the Bloody-flux; as we ſee it every year, nature which moſt commonly has plac't the remedy in the cauſe of our evils, has not forgotten to teach us by experience, that theſe Fruits ſerve for an aſſured remedy againſt the inveterate Bloody-flux, if they are given dry to the weight of a Crown in Gold in Red-Wine.

Since the chief Vertue of Mulberryes is to cool and to keep the Maſs of Blood from fermenting, by qualifying the parts which ſerve for ſanguification, there may be cauſe to believe that they may be a Remedy appropriated to the Gout as well as all other Fruits. For the pain which Gouty Perſons feel in the ligaments of their Joints, is caus'd but by a Blood and a ſeroſity too ſharp, which ſharpneſs is blunted by the great humidity of Mulberries, they inſenſibly evacuating it by Urine. We need not ſeek for other proofs than daily experience, and that which *Hegeſander* has left us in Writing. He relates that the Mulberry-trees did not bear Fruit for Twenty years together, and that during all that time Men, Women, and Children, were ſo troubled with the Gout, that other cauſes could not be then diſcover'd, than the ſcarcity of theſe Fruit.

ART. V.

Of ſharp Cherries.

SHarp Fruits in general are enemies to Old and Melancholick Perſons, when they do not find within themſelves an exceſſive heat; they are not edulcorated in their Stomach (if I may ſo call it) and are diſtributed into their Veins without being Concocted and blunted. Which is not done without cauſing in the Mouth little ſharp belchings, and in the Stomach troubleſome prickings, and in the whole Body an inſupportable heavyneſs.

It does not happen ſo to young People that are Sanguine and Cholerick who have the Entrals heated: but if caſually the ſharpneſs of Cherries with ſhort Stems eaten faſting, cauſes ſometimes in theſe prickings in the Stomach, they need then but to mix Powder Sugar with them, to blunt the point of it.

The moſt refined Sugar and the whiteſt, which we call Royal, is the leaſt proper for the uſe of Man; it heats and drys us too much, and through the abundance of its Sulphur and Salt, it is entirely oppoſite to the principles of our Life: The finer Sugar is the leſs ſweet it is, and the leſs alſo it quenches thirſt. Lime which is a capital Enemy of Man, if it be taken inwardly, or outwardly apply'd, is the chief matter which Refiners make uſe of, for rendring Sugar whiter and more ſolid; and tho' Powder Sugar be made by many repeated Lixivium's, nevertheleſs it ought always to be preferr'd before Loaf Sugar, and if we will chooſe the beſt of all, we muſt always take that which is the whiteſt among the browns. It is that which is extremely ſweet, which quenches thirſt, which moiſtens, and which lenifies the Breaſt: I thought it proper to make this digreſſion for Perſons who love ſweet things, becauſe Sugar is often ſet at our Tables, for rendring our Fruits more agreeable to the taſte.

Sharp Cherryes exhilerate the Stomach, they excite there the Appetite, and appeaſe the drought. They diſſipate the thick humours, and by their ſharp quality, they cut them (as I may ſay) and divide them, either that they may ſerve afterward for Food, or be evacuated with more eaſe.

By all theſe Vertues they are very proper as well as Mulberries, to oppoſe the cauſe and the progreſs of the Gout, and experience ſhews us that Gouty Perſons receive a ſenſible relief by the uſe of Fruits, which qualify the Liver, and which correct the Acrimony of the Blood.

Moreover they powerfully looſen the Belly, if they are freely eaten faſting while the Dew is yet on the Fruit; and experience teaches us every year that they carry off by a Looſneſs long Diſeaſes, which all the other Remedies of Phyſick have not been able to Cure.

The moſt proper time to eat them is in the Morning faſting, either with or without Bread. They have moiſture enough to oblige us not to drink any Liquor after them. As for the lateward Cherries which we call at *Rochelle des Guignes* with long Stems, tho' they may be eaten before Meals; nevertheleſs I allow them to be eaten after Meals: they have an agreeable Aſtriction, which contributes to Concoction, and which cloſes the ſuperiour Orifice of the Stomach, that it performs its Office afterward much better.

The ſweet Cherries, eſpecially thoſe which we call in this Town *Guindoux* and *Guigneaux*, are much better than the ſharp for old Perſons and for thoſe who have a nice Stomach; they do not prick ſo much the inward parts, and they nouriſh more.

Haply there is not any Remedy more agreeable and more excellent for qualifying the Reins, and for clearing thence the Gravel, Slime, and little Stones, than the Wine of ſharp Cherries: We muſt take off them therefore in the Months of *June* or *July*, twelve or fifteen Pounds, we muſt cleanſe them of their Stems and Stones, and caſt them and their Stones broken through the Bung-hole of a Barrel, (*a Veſſel containing ſomewhat more than our Barrel*) of good White-wine. After that they have been there for a Month, and have Communicated to the Wine their cooling and opening quality, you may pierce the Veſſel and drink the Wine with pleaſure. The colour will be agreeable to the Eye, the taſte delicious, and the effects admirable.

CHAP. II.

Of Fruits which ought to be eaten after Meals.

THo' the Fruits which ought to be eaten after Meals are of a matter more firm, which nouriſhes more, and which does not corrupt ſo eaſily as that of the others, nevertheleſs we muſt remember to uſe them with the ſame precautions which we gave in the Preface to this Tract: theſe precautions ought to be ſtood too as Religiouſly in uſing theſe Fruits, as in eating the others. The faults which are committed in their uſe are very conſiderable, and that Perſon whom I Cur'd not long ſince of *Vertigo's* which threatn'd her with ſome ſevere Diſtemper, has been thankful to me ſince, for having forbidden her the uſe of Apples, which ſhe ate irregularly after Meals.

ART. I.

A R T. I.

Of Pears.

NEver has the Induſtry of our Gardiners appear'd more admirable than in the divers kinds of Pears which we have in *France.* They have taken a particular care to Sow Seeds, and to preſerve ſuch Trees, as in their Wood and Leaves gave them marks of a good hope: For as by Sowing a great many Flower Seeds, there come of all kinds, and ev'n ſome that are beautiful and double, ſo by Sowing a great ſtore of Pear Kernels, it ſeems that Nature pleaſes her ſelf in giving us a grand variety of Pear-trees, which produce all new Fruits, and ſome of them delicious to the taſte: haply it is becauſe the Pear is the moſt excellent Fruit of all, that ſhe delights in multiplying its kinds ev'n to an infinite number: It is thus that the *Meſſire Jean*, the *Dame Houdote*, or the *Amadote*, the *Gabriel Egaud*, the *Micet*, the *Martinſire*, and a great many other excellent Pears are come of Kernels, and that they have had the honour to bear the Names of thoſe who rais'd them.

But not to ſtop at this Diſcourſe, which ſeems to contribute nothing to my deſign, I may ſay that the artifice of our Gardiners has multiplyed for us Pears of Summer, of Autumn and of Winter; that it has given us more of *Caſſantes* and of *Burez*, that it has ſhewn us more of Sweet, of ſharp and of Acerb, and that finally it has procur'd for us more of Vinous, of Ambred and of Musked, than we had before.

Among all theſe Pears the ſweet and melting are eſteem'd the beſt, they nouriſh more than the others which are a little ſharp or Acerb, and they are much more friendly to the nature of Man. Neverthleſs there are ſome who prefer before theſe firſt Pears the Sweet and *Caſſantes*, becauſe theſe for the moſt part are odoriferous, and the others are not. They priſe therefore much more the *Bonchretien-Pioulier*, or the great *Winter Musk Pear*, than the *Vergoulette*, or the *Bergamot* of Autumn.

Be it how it will, the Pear in general cools and moiſtens the heated Entrals, and by its gentle Aſtriction contributes much to the Concoction of the Stomach, by gently cloſing its ſuperiour Orifice, and by

Looſning a little the Belly; its the reaſon for which it ought always to be eaten after Meals, for if it be eaten the Stomach being empty, it cumbers us, and loads us much, and moreover it binds the Belly; but however we eat of it after Meals, it always has very good effects, provided that we have the Stomach diſpos'd to receive it: for be it that we eat it Crud, or Baked, or Roſted, or Boyl'd, with Powder Sugar and Cinnamon, as old People ought to eat it, after all theſe manners it always ſolaces the Stomach drain'd of its ſtrength and weaken'd by the exceſs of heat.

That which is to be Obſerv'd in the uſe of Pears, is, that after Meals we ought to eat fewer Beurees than Caſſantes, the former being more digeſted, and more ready to corrupt through the leaſt fault that we commit in our way of living. Moreover we ought always to make choice of the moſt coloured, and reject thoſe which we find Worm eaten. Finally we ought after Pears to drink a good Cup of pure Wine, letting this Latin Maxim have its force, *Poſt Crudum, merum.* But above all we ought to remember not to drink much Wine, nor to drink ſuch as is ſmall; ſmall Wine through its defect of heat not cauſing the Pear to be Concocted, and the other cauſing crudities by its redundancy, make both of them diſorders in a Stomach the moſt ev'n tempered and the moſt ſtrong. It is what experience ſhew'd us not long ſince in a Perſon, who fell into inſupportable pains, having drank much Wine; and *Rodolphus Goclenius* aſſures us, that another dyed having drank much Beer, both, after having eaten Pears to an exceſs.

Becauſe our Stomach is much hotter in Winter than in Summer, our heat not diſſipating it ſelf during that firſt ſeaſon through the pores of our Body, there are Perſons who rather eat Pears in Winter than in Summer, and who do not find themſelves ſo much incommoded by them. Haply theſe Pears have ſweated in the heap, and have there ſeaſon'd themſelves; whereas the Pears of the Summer, having their Sap ſtill in motion, and having not loſt their ſuperfluous humidity, trouble rather the Coction of the Stomach than the Pears of Winter.

ART. II.

Of Apples.

SInce Apple-trees have been cultivated in the *Pais des Baſques*, and in the Province of *Normandy*, Men have had a greater eſteem for their Fruits. Trees have been Sown, and afterward Grafted; they have been after that planted and re-planted: Finally they have been ſo often chang'd in their Soil, Countrys, and Climats, that the Fruit are become ſweet and pleaſant.

I own that Apples were a long time deſpis'd, and that in *Arabia* they have ev'n been accus'd of Contributing to the Ptizick, and to the drying of the whole Body. It has been ſaid alſo that they caus'd weakneſs in the Joints, and that conſequently they increaſt the Gout and other Fluxions, that they engendred Worms in the Bowels, and that finally they caus'd Vertigo's, as experience ſhews it us, and as it happen'd formerly to *Scipio Gentilis* a famous Civilian, who after Meals abus'd theſe ſorts of Fruits.

But if Men have talkt after this manner, either it has been becauſe they knew not Apples well, and that they have been taken for other Fruit, or they judg'd of them, as Men do of all other things, by the ill ſucceſs of thoſe who have abus'd them: for if we will examine the thing very narrowly, we ſhall find that the *Arabians* had none but Apples that were wild, acerb and very unpleaſant to the taſte; that the weakneſs of the Joints, the Worms of the Bowels, and the Vertigo's are caus'd but by the exceſſes which are committed with them, or by the ill præcautions that are taken in their uſe.

On the contrary, Apples which are ſweet and Luſcious, Odoriferous and firm, exhilerate the Heart, and allay the exceſs of its heat; they correct the Gall of the Liver, they dilute the Blood, which is too thick and groſs: in a word they cool and moiſten the heated Viſcera: Moreover, whatſoever is ſaid, they oppoſe the drying of the Body and the Ptiſick, and we ſee but very few of theſe ſorts of evils where Cyder is common: For this drink is friendly to the Stomach, which it heats in a moderate way; it revives the Heart, and opens the Obſtructions of the Entrals:

In a word it is of wonderfull uſe to Melancholick and atrabilarious Perſons; that which iſſues the firſt from Apples ſquees'd in a Preſs is not ſo excellent as the ſecond: and the third reſembles the *Demy-wine* of our Peaſants.

If we mix among Apples a little Powder Sugar, they make us ſpit, and cool our Breaſt.

But they muſt be us'd with precaution, that is to ſay, that they muſt be eaten after Meals, becauſe they are heavy and difficult to digeſt, that they ought to be forbidden Old People, unleſs they find themſelves heated, or that they are prepar'd as Pears with Powder Sugar, Cinnamon and Water, and that finally we ought to drink a little of good Pure Wine after having eaten them.

In the Diſtempers which are accompanyed with a conſiderable heat and drought, they give a great relief, if we eat a little of them Crud, or Boyl'd, or that we put of them in Water: and I wonder that in *France* we give our ſelves ſo much trouble in ſeeking Oranges and Citrons for our Diſeaſes, when we have a *ſhort-ſtart Apple*, or a *Spaniſh Rennet:* Haply things which coſt much, and are often difficult to be had, are much better than the common, and that they much more ſatisfy the mind of the Diſeaſed; for it is this part which we ought often to Cure in thoſe who find themſelves ill.

Finally, Apples do not profit us only by taking them at the Mouth, they are a ſovereign Remedy for Heart-burnings and for the heats of the Stomach if they are outwardly applied: for if a Cataplaſm be made of Boyl'd Apples, and apply'd hot on the Region of the Heart, or on the pit of the Stomach, haply we may not find an Epithem more Sovereign in thoſe Caſes. Alſo experience has ſhewn us that the pulp of a boyl'd Apple put hot on Blood-ſhed and inflam'd Eyes, is almoſt the only Remedy for this evil.

A R T III.

Of Grafted Quinces.

ITs a pleaſant Medicine to Purge ones ſelf by eating after Meals *Portugal Quinces*: The Fruit which I ſo call, are the Quinces whoſe Grafts were brought from that Kingdom, and which are almoſt as pleaſant to eat and to behold as a *Bon-Cretien Pear*, at leaſt they have an odour more ſweet and Luſcious; they are yellow as Gold, and yield in nothing to thoſe Pears in greatneſs, Figure and Beauty.

Quinces are cold and dry, they reſtringe alſo manifeſtly the parts of the Body where they are apply'd; and 'tis by this aſtringent quality, that conſtringing the Stomach in the upper part, and afterward the Inteſtines, after that they are eaten, they ſqueeſe, and force out all they meet within their cavity, be it Excrement, Choler or Phlegm. Its what happend to an Advocate of *Pergamus*, of whom *Galen* ſpeaks, who was pleaſantly Purg'd after having eaten Quinces after a Meal, and having walkt a little upon it: ſo that after all the experiments that we have had of them, we ought no longer to doubt of their Vertues.

Mean while the ſtirring of the Belly which they cauſe, does not happen but to Perſons who have the Stomach weak and nice, and who have need by reaſon of this to fortifie it; for theſe Fruits do not work the ſame effects in a young robuſt Man; and on the other ſide, if they are eaten before Meals, being very far from moving the Belly, they make it tardy; and it is ſo that thoſe do who have it ordinarily too moiſt.

Quinces have alſo other excellent Vertues; if they are eaten Crud, Boyl'd, or preſerv'd with Sugar, they give an appetite, they ſtop a Looſneſs, appeaſe Vomiting, withſtand an old Dyſentery and a Bloody-Flux; and if we ſcrape off them Crud, and put the pulp of them hot on the Region of the Heart in the form of an Epitheme, when a Malignant Fever attacks us, they contribute not a little toward the ſubduing it: Their penetrating and ſweet odour revives the Heart and the Brain, and it has not been heard ſaid hitherto, that Quinces corrupt in the Stomach.

I very much approve the method which

ſome have of making Wine and Water of Quinces. Theſe two Drinks have near the ſame Vertues, unleſs it be that the Water is moſt proper for thoſe who find themſelves much heated, and the Wine more meet for thoſe who do not find any prædominant quality, and who are old or Phlegmatick.

The Water of Quinces which the Greeks call ὑδρόμηλον, is made after this manner. We take in the Month of *October* fifty or ſixty pints of Fountain-Water, of *Paris* Meaſure [*which comes near to our Quart*] we put into it ten or twelve Pounds of Portugal Quinces, pared, cleans'd, and cut in ſlices; they ſteep there till the Water has a yellow colour like that of Spaniſh Wine; after which we ſtrain this Water, and then let it ſeeth ore a gentle Fire till the fourth part be conſum'd, ſcumming it often, and after having put it in a Veſſel well fill'd and well ſtopt, we preſerve it for the Month of *March* following.

The Wine is made after this manner; we take at Vintage time Ten or Twelve Pounds of Portugal Quinces, prepar'd after the ſame manner as I have ſaid, we throw them into fifty or ſixty pints of good Claret *Muſt*, and after that they have wrought for thirty days, we ſtrain the Liquor, we put it into another Veſſel which we ſtop up cloſe, and we preſerve it for uſe.

Theſe two Drinks produce good effects in Perſons who uſe of them; they fortify the inward parts, oppoſe a Looſneſs and a Dyſentery, cleanſe the Reins of their filth, hinder the Vapour of Wine from offending the Head, and ſecure us from Peſtilential Vapours: Finally, they cauſe ſo many good effects, that I muſt paſs the bounds of an abſtract if I would name them all

ART. IV.

Of Medlars and Services.

THeſe Fruits are ſeldom at our Tables, and they are eaten moſt commonly but in a fancy; they are not very agreeable, and there is but little pleaſure taken in eating them. Mean while they are not without their uſe, and contribute ſomething to our Health. They are both ſo near ally'd in qualities that a Perſon will not deceive himſelf if he takes the one for the other. They are cold and dry when they are hard, but when they are ſoftiſh they acquire a better heat, by a ſort of Corruption, that is to ſay, that they are not ſo cold; after the firſt way they reſtringe more and nouriſh leſs: and they ought to be uſed as Quinces, and to be eaten after Meals ſoft, Crud, Roſted, Boyl'd in Wine with Powder Sugar and Cinnamon, or finally Fryed in freſh Butter, which does not render them diſagreeable to the taſte through the Skill of the Cook.

But becauſe after all theſe manners they produce the like effects as Quinces, this will oblige me to paſs in ſilence what I have ſaid in the precedent Article: I ſhall only add here, that the Stones of Medlars being powdred, and then taken by the Mouth to the weight of a Gold Crown in White-wine, cleanſe the Reins of their Impurities, and ev'n drive forth Stones which are ſmall enough to paſs through the *Ureters*, and afterward through the Paſſage of the Urine.

In reality theſe Stones are extreamly dry, and they have in their matter particles which powerfully penetrate; for experience has taught me that the Stones of Fruits, and the hardeſt bones of Beaſts and Fiſhes provoke Urine as ſpecifick Remedies. I do not doubt but that which *Braſſavolus* has left us in Writing concerning the Vertues of the Stones of Medlars, is true, ſince he proves it by two ſick Perſons who were Cur'd thereby.

But we ought not to ſuffer our ſelves to be abus'd on this account by the promiſes of *Quacks* and *Mountebanks*, who boaſt to have certain Remedies for breaking the Stone in the Reins or in the Bladder: I know not whether the Stones of Medlars have more Vertue in *Italy* than in *France*, but at leaſt I know by experience and reaſon, that neither the Stones of Medlars, nor all other Remedies have the force to break the Stone, nor to drive it forth of the Bladder, when it is to big too paſs forth.

The chief Vertue of *Services* is to cool and to reſtringe, as we have ſaid: its through theſe qualities that they ſerve for powerful Remedies againſt moiſt Diſeaſes, againſt inveterate Looſneſſes, and againſt long Dyſenteries. Perhaps the Learned *Bruyerius* had not been Cur'd of a Malignant Dyſentery which laſted him above a Month, if he had not eaten a great many *Services*; ſo true it is that the preſumptuous boldneſs which we have in trying Remedies in our long Diſtempers, often ſucceeds much better with us than prudence it ſelf.

CHAP. III.

Of Fruits, which may be eaten before, or after Meals.

THere are Fruits which may be eaten at all times, becauſe they do not corrupt in our Stomach, but through our fault: Wherefore we ought to have a peculiar deſign, and different præcautions in uſing them. One Perſon would only cool and moiſten himſelf. And beſides this, another will have a farther deſign of rendring the Belly ſoluble: thus there may be need of theſe Fruits in different occaſions.

ART. I.

Of Raiſins.

THe moſt excellent Raiſins which our Province furniſhes us with, and which are ordinarily ſerv'd at our Table, are thoſe which are ſweet, taſting of Sugar and Amber: many prefer them to all other Fruits; and they yield us a Liquor, which is the moſt agreeable and richeſt preſent that ever God gave to Man. If I would extend my ſelf here on the Encomium of Raiſins; I perſwade my ſelf that I ſhould find but too much matter to ſay fine things of them; but, becauſe I propos'd to my ſelf to Write only concerning the uſe of the Fruits of Trees as briefly as poſſible; I muſt be allow'd to deliver my thoughts in a few words concerning the uſe of Raiſins eaten before or after Meals.

But before I explain my ſelf thereon, I fancy that I ought to eſtabliſh ſome general Maxims, for well uſing them, without being damnified thereby.

A Woman who has the Stomach nice and weak muſt never eat Raiſins newly gather'd; they puff up the Belly, they cauſe a rumbling and winds, and trouble the Concoction of the Stomach: moreover ſhe mnſt not eat but of ſuch as are excellent and very ripe, and again ſhe muſt not ſo much as look on thoſe which have grown in the ſhade, and which the Sun has not heated with its rays.

To correct the ill quality of Raiſins, they muſt be gather'd ſome days before you will eat them, or elſe you may take ſuch as have been hung up in a Chamber, or if at time of Vintage you have an inclination for eating ſuch as are freſh, they muſt be dipt into boyling Water, and then into freſh Water, and ſo they muſt be ſerv'd to Table.

Raiſins are moiſt and moderately hot, and by theſe two qualities they are proportionate to the Principles of our Life; they nouriſh much more than other Fruits, if we except Figgs: they revive the Spirits by their ſweet and odoriferous ſavour, they cheer up a Stomach which is languiſhing and heated through Labour, and moiſten the Viſcera, and ſo correct by their pleaſant moiſture the drought and which the heat of Autumn has there caus'd.

Nay there are Phyſitians who do not deny them to their ſick Patients when they begin to amend, tho' on condition that they eat them with Bread, and throw away the Stones and the Skin, as two parts which cannot be digeſted by a Stomach how robuſt ſoever.

If they are eaten faſting, without Bread, as they come from the Tree moiſtned with the Dew of the Night, they purge the Belly ev'n of thoſe who have it naturally tardy; there is neither Water of *Caſſia* nor *Manna* which ought to be preferr'd to Raiſins ſo eaten.

We ought here to remember not to drink Wine unleſs it be well diluted, after having eaten Raiſins faſting: Nay it would be better not to drink at all, or to drink only pure Water; pure Wine mixt in the Stomach with the new Juice of the Raiſins makes ſo extraordinary a fermentation, that the accidents which ariſe from it are much greater than you may imagin: For the Wine carrys the Chyle and the Juices into the Bowels and into the Reins, before they are digeſted, and ſo cauſes impurities and indigeſtions in the Blood; whereas Water hindring the great ebullition of the Stomach, contributes to a good Concoction; it cauſes the Chyle to become more pure, and that we are more refreſht and moiſtn'd by the uſe of the Raiſins.

We ought not ſo to do when we eat them after Meals, for we may drink a good Glaſs of pure Wine, and not conſider ſo much the Raiſins prepar'd as we have ſaid before, as the food which we have taken at our Meal.

Tho the Stones cannot be digeſted, yet we ought not to throw them away when we eat Raiſins after Meals: For ſince they are aſtringent, they correct the great humidity, which is the cauſe of the evils which they bring upon us. We muſt chew them therefore very ſmall, and reduce them to minute parts betwixt the Teeth, that they may contribute to the Coction of our Stomach, and correct the ill qualities of the Raiſins: It is thus we ought to eat after Meals the dry Raiſins which are brought from *Spain*; for by nouriſhing and lenifying our inward parts they ſolace them by their ſweetneſs, and fortifie them by the aſtriction of their Stones.

I ſhall not paſs by here the excellent drink which is made with dry Raiſins, and is call'd *de Cabat*. The Stones muſt be taken away from fifteen or twenty Pounds, and then the Raiſins muſt be bruis'd a little: and in the Month of *January* or of *February*, which is the time that they are brought to us from *Spain*, they muſt be put in an excellent Barique (*a Veſſel ſomewhat more than our Barrel*) of White-wine to drink at *Eaſter*. This Wine will have the colour of a Spaniſh Wine, it will be pleaſing to the Palat, and will have qualities not to be contemn'd; for it lenifies the Breaſt, appeaſes the Cough, helps reſpiration, and fortifies the Stomach and the Liver, creates an Appetite, oppoſes inclinations to Vomit, ſtops a Looſneſs; in a word, it is an excellent Remedy againſt the *Dropſy*, it agrees admirably with Old men, with Valetudinarians, with Phlegmatick or Melancholick Perſons, and finally with Women of a tender Conſtitution.

ART. II.

Of China and Portugal Oranges.

THe Grafted Orange-trees which were brought from *China* into *Portugal*, and which have been multiplied in the later Kingdom, produce Oranges which have a fine Rind, a vinous Juice, and which are very pleaſant to eat; they may be us'd before or after Meals, for being more moiſt than cold, they qualify alſo after Meals a Stomach too hot and too dry, and ſo help Concoction.

Thoſe which are brought us ordinarily from *Portugal* are ſharp or *aigres-douces*, they are colder than the former, and they refreſh more, and more oppoſe the Corruption of our humours.

Sharp Oranges ought never to be us'd after Meals, they hinder the digeſtion of the Stomach by their coldneſs, but they are very proper for quenching the heat of our Liver, and to give us an appetite, if we take the Juice before Meals with Water and a little Powder Sugar, but eſpecially when the great heats of the Summer or of Autumn exhauſt our ſtrength.

I ſay no more here, for that I will not repeat what I have ſaid in the Article of Cherries, where you may ſee what ſharp Fruits are capable of doing within us, and the precautions we muſt take to uſe of them. I ſhall only ſay that the Rinds of ſharp Oranges being ſquees'd a little into Wine, renders it more agreeable to the taſte of many Perſons, and makes it paſs more readily by Urine.

Our ſick Perſons uſe both the one and the other, and if you will believe them on their own experience, they will tell you that there is not a better Remedy than theſe Fruits for quenching Thirſt, cooling the Stomach, qualifying the Liver, provoking Urine, taking away the Heart burning, oppoſing inward Poyſons; in a word, for Curing the Diſeaſes which are accompanied with an inſupportable heat and drought and indeed, if we cut a *China* or *Portugal*, vinous Orange into four parts, and throw it into a pot of Water with the Rin'd, this drink will have all the Vertues ev'n now mention'd.

A R T. III.

Of Spaniſh Pomegranates.

WE cultivate in our Gardens ſweet, *Aigres-doux*, and ſharp Pomegranate-trees which came to us from *Spain*; for as for thoſe of *France* which are wild, we cannot eat the Fruits: The Flowers and Rinds of Pomegranates are aſtringent, and both ſerve to Cure our Diſeaſes which are caus'd through a too great humidity. They have the Vertue of conſtringing the parts of our Body together, and of giving them the Situation which they had loſt: The inſide of the Kernels of a Pomegranate is uſeleſs and undigeſted, our Stomach cannot diſſolve it, and there is no Body who eats it. There is but the pulp which is about the Kernels that yields an agreeable Juice, wherewith we are often ſolac'd in our ſickneſſes.

Sharp Pomegranates ought to be uſ'd before

fore Meals, when the Stomach is empty; and if the point of their ſharpneſs does us hurt, as it happens in thoſe who have this part weak and tender, we need but blunt it with Water and Sugar to make a delicious Drink: Then this agreeable Liquor cools the Stomach, quenches thirſt, qualifies the Liver, weakens the ſharpneſs of the Choler, revives the Heart, reſiſts putrefaction, provokes Urine; in a word, its a Drink proper for the Sick and ſound. It is much better than the *Boüillons* of Veal, and of cooling Herbs, which are taken too often in the Summer, and in Autumn to qualify the Entrals, and to reſiſt the heat and drought of the Seaſon: for the continual uſe which is made of *Boüillons*, is wholly an enemy to the Stomach, their ſubſtance relaxes too much the membranes, and to perform well its Office it muſt have a certain temperament which is not too moiſt; whereas the Drink of ſharp Pomegranates, by reſtringing it gently, tempers this part, and at the ſame time all the others.

Sweet and vinous Pomegranates do not cool ſo much as the ſharp, but they dulcify more, and are more proper for Old and atribilarious Perſons.

Thoſe who find a heat in their Bowels, are very much ſolac'd after having ſwallowed ſome Spoonfulls of the Juice of theſe Fruits: It is ſo that the *Carthaginians* us'd of them, from whoſe Country Pomegranates were brought: and it were thoſe alſo who taught us by their own experience the greateſt part of the good effects which they cauſe in us, when we uſe of them. It cannot be ſaid what goods the Juice of ſweet and vinous Pomegranates, preſs'd forth, ſcumm'd, and fermented may produce: it ſtrongly oppoſes all inward Fluxions, it reſiſts all Fevers which are accompanied with a Looſneſs and an exhauſting of our ſtrength, and it has this proper to it, that it fortifies all our languiſhing parts. If we will make ſome Bottles of it, we muſt ſqueeze forth in a Preſs a ſufficient quantity of Pomegranates, we muſt ſeeth the Juice over a gentle Charcoal Fire to the diminution of the third part, after having well ſcumm'd it, and afterward it muſt be kept for uſe.

If we put in White-wine the Kernels of ſweet or vinous Pomegranates, or after the ſame manner as we have preſcrib'd for ſharp Cherries, we ſhall have a Wine which will yield in nothing to all the Remedies which Phyſick has invented hitherto for allaying the burning of the Reins, for cleanſing forth all the filth, and for hindring Stones from being there form'd.

A R T IV.

Of Corands.

THe Red Corands and the White, which we call *Gadelles*, have very near the ſame qualities, tho' the *Gadelles* are more ſharp, and the Red more pleaſant to eat. Both of them cool and reſtring the parts of the Body through which they paſs; they hinder Vomiting, quench drought, blunt the Choler, remove Obſtructions, fortify the parts, and they ſolace both the healthy and Sick that are heated, if they are us'd before or after Meals.

Their pungent ſharpneſs ought to be corrected, as that of Cherries and Pomegranates, or we may make them into a Sugar Paſte or Gelly, which is very proper for thoſe who have the Stomach weakend by long Sickneſſes; and I have Cur'd many Perſons of conſiderable quality, who had this part very much afflicted by continual Vomitings, and had a troubleſome Looſneſs of the Belly, by giving only a

Paſte or Gelly of Corands, and of the moiſt conſerve of Provins Roſes.

In Imitation of the *Turks*, during the great heats of the Summer, we may make of the greateſt part of the Fruits before ſpoken of, a ſort of *Sherbet* to be drank with Ice: and I allow young Sanguine and bilous People, who have known by experience that drinking with Ice does not incommode them, I allow them, I ſay, to drink of it, with prudence for allaying the exceſs of their heat: This will be a ſure means to hinder them from being ſet upon by continual and Malignant Fevers, and to keep them in good Health during all the Summer and Autumn. As for others who are of another temperament, and of another Age, they muſt not touch of it, and they muſt remember that heat, which we muſt not deſtroy, is one of the Principles of our Life.

THE TABLE OF THE Chapters of the Firſt PART.

THe Art of Pruning Fruit-trees. Pag. 1
Chap. 1. *The Pruning of Fruit-trees for the Month of* February. p. 2
Chap. 2. *The Pruning of Fruit-trees at the beginning of* May. p. 31
Chap. 3. *The Pruning of Fruit-trees at the beginning of* June. p. 33
Chap. 4. *The Pruning of Fruit-trees at the end of* July. p 42
An Explanation of ſome words us'd by Gar*diners to expreſs themſelves ſpeaking of Fruit-trees.* p. 48

The end of the Firſt Table.

THE
TABLE
OF THE
SECOND PART.

OF the Uſe of the Fruits of Trees for keeping us in Health, or for Curing us when we are Sick. Pag. 50
Chap. 1. *Of the Fruits which ought to be eaten before Meals.* p. 59
Art. 1. *Of Figgs.* p. 60
Art. 2. *Of Nectarins and Peaches.* p. 65
Art. 3. *Of Plums and Apricocks.* p. 69
Art. 4. *Of Mulberries.* p. 71
Art. 5. *Of ſharp Cherries.* p. 74
Chap. 2. *Of the Fruits which ought to be eaten after Meals.* p. 78
Art. 1. *Of Pears.* p. 79
Art. 2. *Of Apples.* p. 83
Art. 3. *Of Quinces.* p. 87
Art. 4. *Of Medlars and Services.* p. 90
Chap. 3. *Of the Fruits which may be eaten before and after Meals.* p. 93
Art. 1. *Of Raiſins.* p. 94
Art. 2. *Of China and Portugal Oranges.* p. 98
Art. 3. *Of Spaniſh Pomegranates.* p. 100
Art. 4. *Of Corands.* p. 103

The end of Second Table.

A CATALOGUE of ſome Books Printed for and to be ſold by *Thomas Baſſet* at the *George* in *Fleet-ſtreet*.

Folio.

DR. *Lightfoots* Works in two Volumes.
Speeds Mapps, and Geography of Great *Brittain* and *Ireland*, and of Foreign Parts.
Wanleys Hiſtory of Man.
Biſhop *Wilkins* Real Character.
Pharmacopeia Londinenſis.
Hooker's Eccleſiaſtical Polity.
Judge *Jones* Reports.
Judge *Winches* Book of Entries.
Guillims Heraldry.
Biſhop *Sauderſons* Sermons.
Foulis Hiſtory of Romiſh Treaſons.
Crokes Reports in three Volumes.
Daltons Offices of Sheriffs.
——— Juſtice of Peace.
Cokes Reports in 13 Parts.

Selden's Jani Anglorum in Engliſh.
Lex Mercatoria.
Mezerays Hiſtory of *France.*
Cowels Interpreter, Enlarged by *Manley.*
Littleton's Reports.
Dr. *Howels* Hiſtory of the World.
Grotius of War and Peace, Engliſh.
Townſends Hiſtorical Collections.
Pharamond.
Heaths Chronicle.
Pettus of Mines and Minerals.
Hiſtory of the *Cariby* Iſlands.
Brents Hiſtory of *France.*
Browns Entries in two Parts.
Sir *Roger Manly*'s Hiſtory of the Wars of *Denmark.*
Lord *Bridgmans* Conveyances.
Lord *Cokes* 2d. 3d. and 4th Inſtitutes.
Huttons Reports with New References.
Modern Reports.
Leys Reports.
Hetleys Reports.
The Ten Volumes of Year Books with New References.
Edward the *Second* Publiſhed by Serjeant *Maynard.*
Officina Brevium.
A Catalogue of all the Common and Statute Law-Books of this Realm, to this preſent Year, 1684.

Quarto

Quarto.

Dr. *Littletons* Dictionary, the Second Edition.

Gouldmans Dictionary.

Coles Dictionary.

Mieges French Dictionary.

The Travels of the Patriarchs.

A Diſcourſe of the Laws Civil and Eccleſiaſtical.

Doctrina Placitandi.

Moyles Entries.

Compleat Clerk.

Dr. *Parker* of the Law of Nature.

Sheppards Grand Abridgment.

Dr. *Haywards* two Sermons before the King.

A Collection of the Caſes relating to Church Communion, Written by ſeveral Miniſters in and about *London*.

Counter-Scuffle.

Mandevils Travels.

Hiſtory of the Seven Champions.

Dr. *Sherlocks* Sermon on the Diſcovery of the Plot.

The Difference of the Caſe between the ſeparation of the Proteſtants from the Church of *Rome*, and the ſeparation of Diſſenters from the Church of *England*.

Medicina Curioſa.

Octavo.

Octavo.

Mieges French Dictionary.

The *London Practice* of Phyſick, being the whole Practick Part of Dr *Willis*'s Works.

Dr. *Salmons* Diſpenſatory.

——— his *Doron Medicum*.

Several Tracts of Mr. *Hales* of *Eaton*.

Biſhop *Sanderſons* Life.

Coles Dictionary Latin and Engliſh.

Biſhop *Wilkins* Sermons, never before Extant.

——— Principles and Duty of Natural Religion.

Filmers Patriarcha.

Mieges French Grammar with a Vocabulary and Dialogues.

——— ſhort French Grammar.

Mieges Preſent State of *Denmark*.

——— Coſmography.

Berniers Travels.

Art how to know Men.

Pools Engliſh *Parnaſſus*.

Dr. *Whitby* of Idolatry.

Dr. *Hinckley* and Mr. *Baxters* Letters.

Sheppards Actions for Slander.

——— Action on the Caſe for Deeds.

Blounts Antient Tenures.

Compleat Solicitor, entring Clerk and Attorney.

Touchſtone for Gold and Silver.
Pettyt's Rights of the Commons.
——— *Miſcellanies.*
The Egyptian Hiſtory.
Atwoods *Jani Anglorum facies Nova.*
Sir *John Pettus* of the Conſtitutions of Parliaments.
Ruſſian Impoſtor.
Ogilbys Æſops Fables with Cuts.
Lawrence's Intereſt of *Ireland.*
A New Book of Inſtruments.
French Monarchy.
Anglers *vade Meum.*
Scarons Novels.
Meriton of Dreams.
Clerks Tutor.
Brown of Fines and Recoveries.
Kitchin Phyſick.
Poſing of the Parts.

Duodecimo.

Heylins help to Hiſtory.
Lukins Chief Intereſt of Man.
Help to Diſcourſe.
Mothers Bleſſing.
Grotius *de veritate Relig. Chriſt.*
Biſhop *Lauds* Devotions.
Ladys Calling.
Vaughan of Coins and Coynage.
Meritons Guide for Conſtables.
——Landlords

——Landlords Law.
Phillips Principles of the Law.
Manwaring of Conſumptions.
Catalogue of Law Books.
Pharmacopeia Londonienſis.
Butlers Rhetoric.
Lucians Dialogues Greek and Latin.
Tullies Select Epiſtles.

FINIS.

---

15 FEB 77